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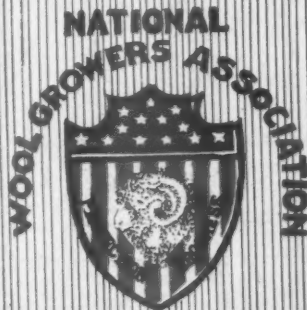
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WOOL GROWER

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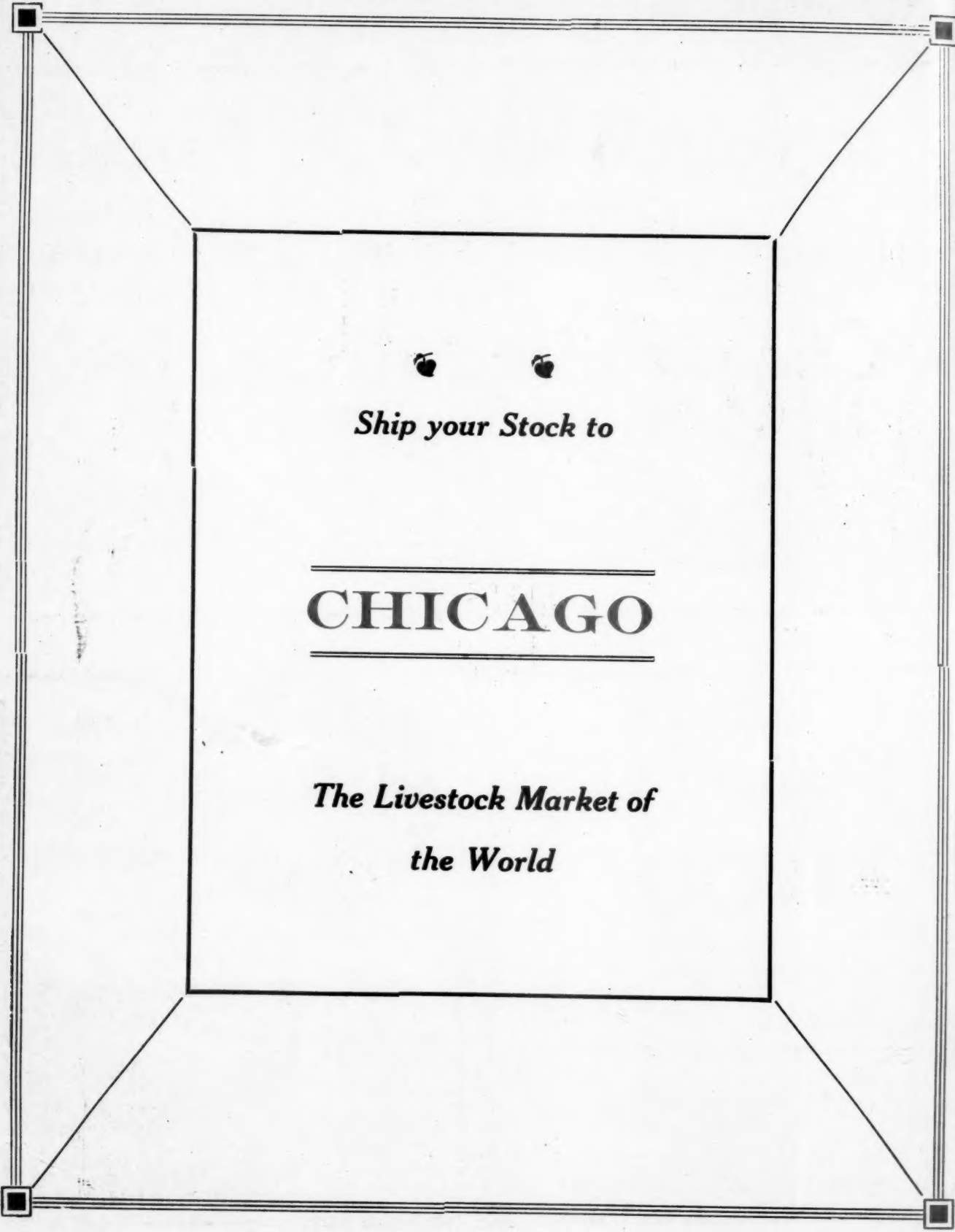
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The National Wool Grower

VOL. II.

HOLIDAY EDITION, 1912

NUMBER 11

The Influence of Live Stock Production Upon Soil Fertility

THERE has been and still is a very general lack of appreciation of the value of farm manure produced by live stock on the farm.

The agriculture of the United States is relatively new. It cannot be said that any system or systems of farming have become permanently established. Agricultural policy and practice is largely tentative. Rapidly changing economic conditions will force correspondingly great changes in agricultural practice. Farmers ought not and doubtless will not long allow their progress to be retarded in any large way by stereotyped methods and a circumscribed outlook.

In a country whose agriculture is new there are few agricultural questions which are either difficult or complicated. As an agriculture becomes older, the number of problems arising increase rapidly and their solution becomes correspondingly difficult. The agriculture of the United States will be very shortly called upon to settle some of the most far-reaching questions which have ever been presented.

There is a newness about most agricultural problems that is fascinating, and while the agricultural successes and failures of other and older nations furnish valuable data and are highly suggestive, there is a sense in which the farmers' problems of this country are peculiar to the United States. With our numerous agricultural colleges and experiment stations, national wealth, intelligent and well-to-do farmers, and with our vast but rapidly

By Herbert W. Mumford, Professor of Animal Husbandry, University of Illinois

wasting agricultural resources, the United States has the opportunity to establish an agriculture that will clearly outrank that of any other nation. To do this will require the prompt, well directed co-operative effort of all who can in any way contribute to this end.

Agricultural betterment is a larger question than that involved in any single branch of agriculture. It frequently happens, however, that circumstances which affect an important branch of agriculture may also directly or indirectly affect other phases of the business.

No important branch of agriculture has experienced and survived more vicissitudes than live stock production. Farmers have frequently become panicky over it.

In some sections of the country there

has been a growing tendency to abandon live stock production for exclusive grain growing. Conditions have favored the change. The fact should not be lost sight of, however, that some of these causes will not continue to operate with the same force. On the other hand it is safe to assume that new difficulties will arise.

If there ever was a time when the farmers of a commonwealth were warranted in largely discontinuing live stock production, that time has passed and for the following reasons:

Intelligent live stock husbandry is more profitable than grain growing. The multiplicity of kinds and methods of live stock production and the variations in market value, both of feeds used and animals involved, precludes the possibility of publishing here a comprehensive and detailed account of the profit making possibilities of the business.

While it is true that at times and under unusual conditions, which have been particularly unfavorable for profitable live stock production, exclusive grain growing has seemed as profitable and in some cases more profitable. It is not true to-day, nor is it likely to be true until the demand for corn, clover hay, alfalfa and other foods largely used in the production of meat come into more general use in the human dietary. These crops are suited primarily to live stock production and as long as they are grown, they, together with the by-products of many other farm crops,



A MARKET FOR GRAIN THAT MAKES MEN AND FERTILE LANDS

will be used largely for live stock production either in this or other countries.

A thorough test has been made in this country and it has been pretty well demonstrated that farmers will not indefinitely convert crops of the farm into meat unless adequately remunerated. If there is a shortage of meat animals, it is due as much or more to the fact that live stock producers are not now satisfied with promises of profits. A distinct shortage stimulates prices. A distinct advance in prices stimulates production. There is no likelihood, however, that live stock production will be overdone, as the area that can be devoted exclusively to live stock production is rapidly disappearing. Then, too, the meat eating population is increasing more rapidly than live stock production. Please note that I use the expression "meat eating population." I do so advisedly.

To be sure, it will take a little time for people generally to appreciate the fact that for many years in this country they were able to buy meat at a price which was but little above the cost of labor involved in its production. It is to be expected that until the cost of producing meats is more generally understood there will be occasional "boycott" demonstrations. There is no need of alarm that Federal or State investigation of the present high cost of living will reflect to the discredit of the stock raiser, providing, of course, that such investigation shall be conducted along scientific and practical lines by thoroughly informed and adequately trained men. Let no one be deceived that the present high prices for food stuffs is temporary. All that the consumer can justly demand is that food stuffs shall be available at prices which represent a fair profit above the costs of production and distribution.

It is good policy for a nation or a state to encourage intelligent agricultural production. The most effective way of encouraging agriculture is for prices to be maintained on a stable basis which represents a reasonable profit to the farmer above the cost of production. The government eventually will be forced to protect producers as well as consumers, for the time is rapidly passing when any necessary factor in the business of the production and the marketing of foods will long thrive at the expense of any other.

Intelligent systems of live stock husbandry are the most profitable systems of farming under conditions likely to prevail or a long series of years, and doubtless

indefinitely. Then too, in considering a question of such significance, only averages extending over a series of years equally favorable to grain growing on the one hand and live stock production on the other, should be considered conclusive. In these comparisons, live stock production is likely to lose much in light of the fact that our crops are produced by men who are primarily successful grain growers, involving relatively simple operations and who are more or less deficient in their knowledge of successful live stock management which presents numerous complicated and involved processes. While it is true that the fertility of a farm cannot be maintained simply by returning to the farm the manure made by live stock fed upon the crops grown on that farm, it still remains true that most systems of live stock farming call for the purchase of less plant food than any system of grain farming.

It would seem, therefore, that the easiest and most logical procedure in developing a permanent agriculture would be to work out a variety of systems of live stock husbandry which would retain as much as possible of the fertility removed in cropping, supplementing whatever lack of fertility there may be by the purchase of mineral fertilizers, or the purchase for feeding purposes of the large supplies of grain produced and bound to be produced by grain farmers. This buying of grain to feed need not be done with the thought of building up the stock farmer's farm at the expense of his neighbors, but in a public spirited and economic sense assist in making a good market for the grain produced by those who for personal reasons prefer to remain grain farmers who do not need the fertility in the crops they sell because they may follow a carefully planned and scientifically sound system of grain farming—of permanent agriculture without live stock.

In this connection an illustration taken from the State of Illinois will be interesting. Exact statistics showing the amount of farm products shipped out of that State and those used for manufacturing purposes are not available. It is believed, however, that the amount of corn reserved on the farm for feeding purposes would fall considerably short of 50 per cent of the total production of the State. Illinois produced in 1911 upwards of 300,000,000 bushels of corn. Assuming that one-half of this is shipped off Illinois farms, we wish to call attention to the fact that the 150,000,000 bushels so shipped, would

fatten each year over 2,500,000 steers, or their equivalent in other live stock, and that the fertilizer produced by this feeding would increase the annual possible production of the State \$15,000,000. I believe the time will come when it will be considered bad economics to transport numberless car loads and ship loads of grain to far distant lands for feeding purposes. It may be even practically impossible for transportation companies to handle such traffic. Already railroads are having difficulty in handling the present volume of business. The necessity of keeping the cost of foods within reach of the masses, that is, at such a level that the laboring man can be well nourished and highly efficient, will eventually demand that the distance between the producer and consumer be shortened.

One statement will doubtless be sufficient to illustrate the point. In most, perhaps all, European countries, food stuffs are offered consumers at a price which is noticeably closer to the price which the producer receives than is the case in this country. There are some legitimate reasons perhaps to account for part of this discrepancy, but by no means all of it.

It is reasonably certain the highest type of agriculture is not possible without live stock. If the highest type of intelligent citizenship is to prevail in this country, it will rest largely upon the possibility of developing standards of living among country folk which will necessitate systems of agricultural practice which constitute the highest type of agriculture. In other words, it is possible to build up an enduring civilization around systems of farming which do not exclude live stock and which will not only profitably utilize to the fullest extent the agricultural resources of the United States but develop an intelligent and influential yeomanry.

May I sum up then by saying that—the importance of animal husbandry as a means of maintaining agricultural prosperity is clearly indicated by the history of nations. A mere comparison of the types of farmers found in England, Scotland, Denmark, and Holland with the peasant wheat growers of Russia or with the wheat and rice farmers of India is sufficient to illustrate the close relation between live stock and agricultural progress.

Animal husbandry necessitates rotation of crops and frequent seeding down. It requires activity and skilful management the year round. It compels the farmer to observe market conditions. It brings him in contact with men, both as a buyer and

a seller. It enlarges his heart, and broadens his sympathies beyond the routine of sowing, cultivating and reaping.

Grain farming, on the other hand, leads to continuous cropping without proper rotation. It eliminates meadows and pastures. It involves the strenuous life for a short season of the year, followed by a long period of inactivity. It creates an itinerant laboring class and stimulates tenantry rather than permanent farm homes. It fosters the land-robbing spirit. Corn farmers, wheat farmers, cotton farmers, rice farmers, grain farmers, as a class are strongly led to overdraw their soil-fertility account, for most men engaged in exclusive grain growing manifest small interest in a permanent agriculture. The history of agriculture in this and other countries shows that the live stock producers have taken a leading part in efforts to maintain and increase the fertility of soils, and in my judgment the live stock producers can now be relied upon more than any other class of farmers to carry forward the gospel and practice of the highest type of permanent agriculture.

While it is conceded that permanent maintenance of soil fertility without live stock is possible, it is not practicable as a State-wide policy, because it is not the highest type of agriculture and because few farmers can be induced to comply with all the conditions necessary to make it effective. While grain farming will ultimately supplant live stock husbandry where conditions make such a system of agriculture practicable, it should be resorted to only when and where live stock husbandry proves less profitable. The production of live stock is a supplement to grain growing, a further possible, entirely feasible and profitable step, a farm manufacturing process which converts raw material and by-products into more concentrated, valuable finished animal products, which readily command a cash market. It is a supplement to and not a substitute for grain growing. It not only increases the income, but also, and at the same time, lessens the removal of plant food from the farm. It is an enterprise which aids materially in the development of a well-balanced agriculture.

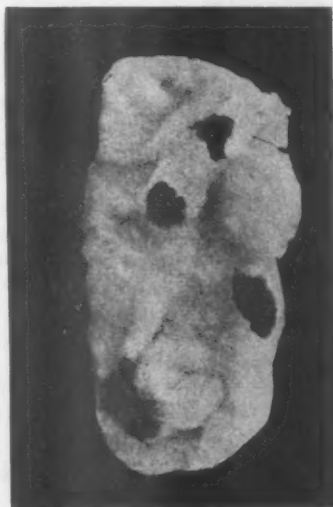
The problem of a permanently profitable agriculture that is worth while is a problem of the farmer as well as a problem of the farm; and no other factor exerts such a profound influence upon the development of the farmer as the ownership of live stock. In other words, it should not be lost sight of that aside from

all elements of profit the establishment and maintenance of systems of farming involving the large use of live stock, means that inevitably farms will be occupied by men and women of a high order of intelligence with a full appreciation of the best standards of country life.

PAINT.

We herewith reproduce a photograph of some scoured wool showing the paint brand remaining upon the wool. Any one who notices this will at once realize that paint must be very detrimental to wool, and must to a considerable degree reduce its value.

In the sample shown the paint appears on the scoured wool, but in most instances when the manufacturer opens the branded



PAINT ON SCoured WOOL

fleeces in his sorting room he has laborers go over each fleece and clip off every atom of paint that can be found. This entails considerable expense for labor, but there is also a great loss in the wool that is clipped off with the paint. For instance, when we were East last spring, we obtained a statement from a large manufacturer covering one of the large Wyoming clips. The manufacturer had purchased 356,847 pounds of Wyoming wool. This of course was all branded. The labor cost of clipping off this paint was \$462.52. The paint and the wool that was clipped off with it weighed 2,904 pounds, which was a dead loss. This 2,904 pounds had cost the manufacturer 19½ cents per pound. Therefore his loss from paint was \$566.28.

Then the freight on this 2,904 pounds from the range to the mill was \$58.08, making a total loss from the paint of \$1,086.88. This loss amounted to one-third of a cent on each pound, or one cent upon each scoured pound. An item of this size should receive the consideration of every wool producer.

We have always contended that the wool grower used too much paint in branding his sheep. Not only are too many brands placed upon the sheep but too large an amount of paint is used on each brand. If you go around a branding chute you will see the man who is handling the brand dip it in the pan of paint, then hold it over the sheep while it is still dripping and thus get a great deal more paint on the sheep than is actually necessary. Too many sheep are branded. The best brand that some sheep could have would be no brand at all.

In the October issue of this paper we published as the leading article an experiment conducted by the Wyoming Experiment Station, showing the efficiency of the various brands. We think this experiment was intensely practical and should prove highly valuable to wool growers if they will but learn its lessons. It was shown by this experiment that Kemp's Branding Fluid, while it did not remain legible for a year, produced a brand that was easily scoured out of the wool. Therefore, many wool growers are in a position to use this brand. It at least should be used for the temporary marking of all sheep, which is extremely common at the lambing season. Some of it should be kept on hand.

We want to ask every wool grower to file away his copy of the October issue and get it out and read it over carefully just before he brands his sheep next year.

It is only in this way that we can make improvement.

WOOL IMPORTS.

For the year ending June 30, 1912, we imported into the United States 86,760,993 pounds of clothing wool, valued at \$18,908,227. All of this wool could and should have been produced at home, and the country would have been \$18,908,227 richer. Not only in money would we have been enriched, but also in the fertility of the soil and in the better condition of labor. The production of this wool at home would have meant more wheat, more corn, more hay, and more mutton, and our people would have been better all around.

SHEDDING WOOL.

The following inquiry comes from Malta, Montana:

"Can you answer for us the following questions: If a sheep was not shorn how long would its wool grow? Why do not all sheep shed their wool the same as other animals do their hair?"

From the above questions it is not clear whether the inquirer desires to know the length of time a fiber of wool would continue to grow, or the maximum length the fiber might ultimately attain.

The ultimate length that a fiber of wool would develop depends not only on the length of time the fiber is permitted to grow but largely upon the breed of sheep and the care given to the sheep. The coarse wools of course produce longer fibers than any of the other breeds, and of the coarse wools the Lincoln gives decidedly the longest fiber. Where Lincoln sheep have been well cared for and not shorn the wool reaches an almost incredible length. We have before us a lock of Lincoln wool that measures twenty-three inches in length. It was grown in England and is said to represent about two and one-half years' growth. The longest wool of which we can find any authentic record is also a lock of Lincoln wool thirty-six inches in length. This wool was measured and examined by a reliable English engineer and dependence can be placed in the report. We are not advised as to the time required to produce the growth, but it was certainly not less than three years, and probably from a sheep that had never previously been shorn.

Now if our inquirer desires to know the length of time that wool would continue to grow we must refer to some Australian experiments conducted to determine this point. Some time ago for experiment several Merino sheep were left unshorn for ten years. The wool at the end of that time was about twelve inches long. The growth of the first year was two and one-half inches and the second year two inches. In this manner the increase lessened every year so that the last four years the amount was scarcely one-half inch.

We believe that it is generally accepted that wool grows about two-thirds of its length during the first six months after shearing. That is, a staple three inches long at twelve months was two inches long at six months. There are many reasons why wool should grow faster immediately

after shearing, and a sheep that is shorn twice each year produces a pound more wool than one that is shorn but once. In California where sheep are shorn twice a year the yield is fully one pound greater than on the sheep only shorn once a year. The most rapid growth of wool is on the young lamb and the rapidity decreases as age increases, ultimately reaching a point where growth is absent. What that point is we do not know, but in the above experiment it is probable that at the end of the tenth year the wool had attained its maximum growth.

As to why sheep do not shed their wool, the cause or reason for the annual shedding of the coat of certain species of animals is not well understood. Certain species do not shed their hair at all. Others continue to shed throughout the entire year, while others shed at certain seasons. As a general rule shedding is more pronounced in wild than in domestic animals, and the longer the domestication the less the tendency to shed. In the sheep the Merino breed has less tendency to shed than any of the others. This is due to the fact that for more than three thousand years the Merino has been bred with the fixed purpose of wool production. Such intensive wool breeding has so changed the natural characteristics of the Merino that today where this breed is kept under reasonable conditions as to feed and climate the natural tendency to shed is absent. The other breeds not having had this intensive wool culture for so long a period retain in some degree their natural inherited tendency to shed.

The failure to shed its fleece is not a natural characteristic of the genus to which the domestic sheep belongs. The wild sheep, as also the less cultivated sheep of Asia and Africa, still sheds its coat about as regularly as does the cow or horse. In fact in certain partly civilized countries the sheep's wool was long obtained at certain seasons by pulling it off rather than by shearing. This could only be done at a time when natural moulting was taking place.

In wild animals, or those kept absolutely under conditions imposed by nature, shedding occurs at that particular season when a scarcity of dry, hard feed has changed to an abundance of soft grasses. Under the influence of the scarce dry feed the growth of wool had stopped, due to a lack of nourishment to the wool roots. The coming of abundant new feed and favorable conditions starts a rapid growth of

fiber. The point where the new live growth joins the old, dead growth is naturally weak, and there it breaks, and the wool or hair is shed. With domesticated animals kept under more or less artificial conditions the case is different. The seasonal changes are not so acute. During the winter the domesticated animal, even the sheep on the range, is furnished an abundance of forage and the wool is kept growing. When Spring comes it finds the animal in good condition and there is not a sharp change from worse to better conditions. Therefore, there is less chance for the fiber breaking where the new growth joins the old.

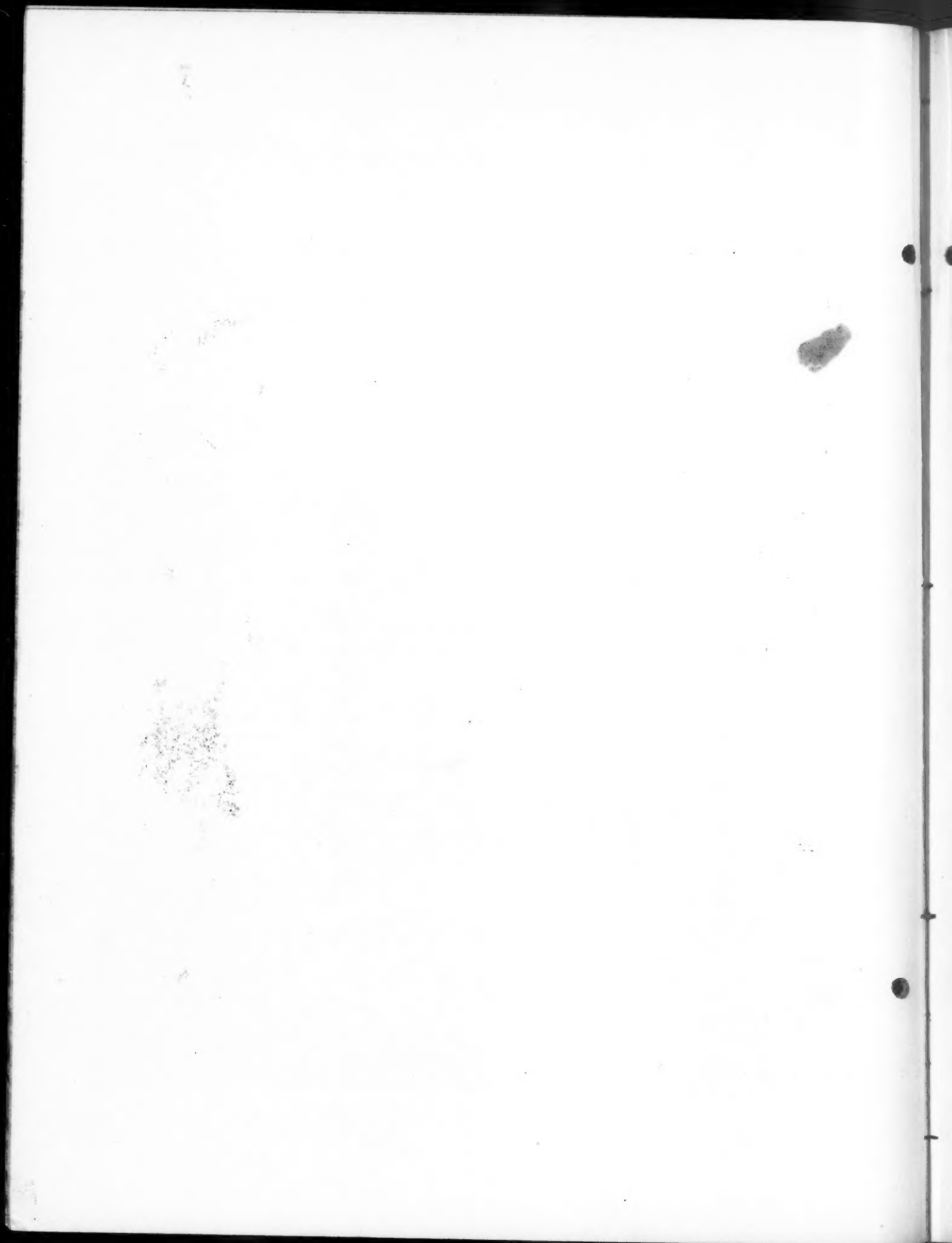
DECEIVING CONGRESS.

Last winter one, Samuel Lipson, a wage worker of Lawrence, Massachusetts, testified before the congressional committee investigating the strike of woolen operatives at Lawrence that his wages averaged from \$9 to \$10 per week when he worked steady, and from \$3 to \$5 per week when work was unsteady. Such testimony, of course, left the impression that this wage worker was receiving a very low wage, and he tried to establish this opinion by referring to the fact that he received but from \$3 to \$5 per week part of the time. This Lipson is employed by the American Woolen Company at Lawrence, and the treasurer of that mill has examined the books of that company and shows that Lipson received an average of \$11.52 per week for an average time of 52 hours and 40 minutes per week. This average of \$11.52 per week is the average earnings from the week ending November 9, 1910, to the week ending January 10, 1912. It is therefore apparent from this that this Lipson mis-stated the facts to members of Congress, and deliberately led them to believe that his wages were decidedly lower than they were. In our judgment, this is a serious offence, and this congressional committee should recall this Lipson, as well as demand the books of the American Woolen Company, and if it is proven that he misrepresented the facts, he should be prosecuted for perjury. The American people have a right to the truth relative to this wage question. No doubt a great deal of the biased material that has been placed before the country by those advocating a low tariff cannot stand the light of honest investigation as is proven by this case.

162



WITH BEST WISHES FOR A PROSPEROUS NEW YEAR



WILLIE WILKIE'S WOOING

BY JOHN CLAY

IN THE southern slopes of the Lammermoor Hills are many pleasant farms. The hill and the half hill holdings always attracted me. As you come up from the valley of the Tweed, with historic Hume Castle on your right and triple Eildon on your left crossing little valleys drained by lovely streams, you arrive eventually at the farm of Wedderlie. There on the low grounds you had arable land pastured by Leicester-Cheviot sheep, and then as you went higher you passed by only the breadth of a stone wall from tame grass to moorland and heather. By the side of a babbling brook some 400 paces from the main buildings stood the Washing House, a little thatched cottage, where the shepherd who tended the half-bred sheep lived. When the cottage got its name history telleth not. In old days the folks from the farm place must have used the little burnie as a laundry. Before the days of water works and lead pipes and brass cocks the clothes went to the water, just as in present days in southern France and Italy. The stream is now bridged. Look up through its graceful arch and a lovely view meets your eye—a stream dashing over rocks, on one side great beech trees hanging over its edge, on the other pleasant meadow lands decked in Spring and Summer with glorious wild flowers, playground for dragon and butterfly, where lark and landrail build their nests, and far away deep brown hills that Autumn purples with splendid glow. Turn back, Time, and give me once again those days, days of gold, when youth was at the helm and every sail was bulging with health and glowing energy, when the scent of the wild moorland was incense to your nostrils and the springing heather seemed to dance beneath your feet! Now, it is almost a memory. The figures have faded. To me little is left, although the stream still sings as it breaks over its bed of stone and rock, and the same heather blooms as it did fifty years ago. Nature has not changed, but new scenes have given birth to new loves and tender associations.

In my time three generations of Wilkies have lived in the Washing House. New roofs of thatch have been placed on the walls. Two cottages have been put into

one, but it looks the same, and the old byre still stands where it did. When I was a sprawling infant old Willie lived there, and when he was gathered to his fathers, and laid away in Westruther Kirk-yard, his son John reigned in his stead, and a numerous family gathered round the ingle-nook. His eldest son, Willie, was just starting at the Parish School, and as the years progressed he grew up to be a big strapping man, very sedate and observant. He had an old head on young shoulders, and by the time he was



JOHN CLAY

16 he was considered apt enough to help at the lambing time on the half-bred end of the sheep work. And as age crept on the father, the son took the lead. At lambing, shearing, and weaning, his word went with his master, and young Willie, as the countryside called him, was looked upon as a leading expert among his neighbors. His opinions, very slowly and conservatively stated, carried great weight with his brother shepherds. Even the flock-masters called him in to see their new purchases of either rams or ewes. John Buchan, the doyen of Lammermoor herds, ventured the opinion in the Wed-

derlie clipping shed, when Willie was absent getting another cut of sheep to fill the fast thinning pen, "that he considered young Willie as a worthy successor of his father and grandfather, and that better herds than they had never whistled to a collie on a hillside." Even Wat. Stobie, who was inclined to envy other folks' success, jaloused "that young Willie could herd his own hirsel at Blackrig, and that was a kittle job, more especially in a bad April." The world was wagging on, and Willie with it. Summer days drifted into Fall. Winter snows came and Spring broke again. The song of birds came from the meadow lands, and the mournful note of the wild pigeon echoed through the resinous pine woods. Even the song of the babbling brook taught Willie nothing about that heavenly feeling which springs perennially in the human breast. Love had left untouched the chords of his heart.

Every second Sabbath for several years past a shepherd from Dye Water passed Willie's house on his way to church. With him generally was a tall, willowy girl, with brown tresses and glowing cheeks. Her father had sent her to a boarding school for a year in a near-by town, so the girl had the reputation of being a bit uppish. And, although Willie passed the time of day with his neighbor, he had always been afraid to address the daughter. Then, by bad luck Willie was an Auld Kirker and Andrew Smith attended the Free Kirk. The attendants at one of the churches scarcely ever entered the other, and so the bigotry of by-gone days put a stumbling block in Cupid's ways. The little god was mixing medicine,

but he got no chance to administer it. Willie Anderson, the shepherd on the black faced hirsel, was fond of stepping down to the Washing House to have a crack wi' young Willie, and he would often say, "Man, Willie, you should get marrit. There's a bit lass lives ayont me on Dye side that would be a grand match for ye."

"What would her father say if I made up to her. He is a Free Kirker like yourself, Willie, and they say he's unco strict. I've thought mair than once of stepping in to hear Mr. Izzet preach, but I've never

had the courage. They say the lass is a grand singer."

"Weel, Willie, I'll ca' for you next Sabbath morning, and you'll come down and hear our minister preach. If he is on his favorite subject of the deil you'll hear Auld Nick get a tongue lashing that will make him hunt his hole till Monday morning, at any rate. When he is on that subject even Bob Ramage, who is worn out wi' looking the hill in the morning and walking three miles to kirk, canna get his usual nap. Three Sabbaths past in his excitement while encountering the great Archangel he shoved the Bible off the desk of the pulpit, and it fell on Sandy Shillinglaw the precentor's head just as he was helping himself to a pinch of snuff out of Alcoran the Shoemaker's mull. I tell you there's no muckle rest for Satan in our kirk."

So the next Sabbath morning the two shepherds walked slowly towards the place of worship. They crossed the bridge, and then turning up the approach to the Wedderlie big house they were joined by Jimmy Trotter, the custodian of the place, for the owner scarcely ever came near it. Then the way led across grass parks, over stone stiles through pine woods, then more stretches of grass, till they reached the ivy covered church around whose door a crowd were collected, all very solemn, the women with branches of thyme in their hands, and the men smuggling peppermints into their mouths, the younger men sneaking one to the girl beside them. In these hill parishes where people live far apart much of the gossip is retailed in the church yard or by the door of the place of worship, and more or less courting is done both in and out of the building. Love will find the way, even in Lammermoor. Izzet was in grand fettle, and he mauled his unseen enemy in gallant style. As no answer came back he had to imagine new machinations, and then smash them to pieces. Bob, the Scotch terrier that lay at the pulpit door, gave a series of low growls to keep pace with his master's indignation. Willie's thoughts were not with the minister. They were with his heart, and that was beating quicker than usual. As he sat down in a side pew opposite the Smith girl his eye had caught hers. He felt a sudden twinge, a touch of steel, a sort of gulp in the throat, a tremulous shaking of head and hand, a strange, unaccountable feeling that had never come over him before. The dormant spark that had been sleeping in his bosom had been lit. The apathy and silence of

fleeting days had gone—another sphere of life had been entered. Now, Willie, that your hour has come, will it be victory or defeat, for there are others who have already got a start? As the church "scaled," as they say in Scotland, a young man named Jimmy Luke came down the road, and at once joined Jeannie, who seemed nothing loth to have his company. They walked on in front while Willie had to content himself with the company of Andrew Smith and Willie Anderson. Just as they got near to the big house Luke bade the girl adieu, and turned towards the above place. Willie advanced to his place rather hesitatingly. In those primitive parts social conventions do not count for much, and although Willie had never seen the girl except at a distance, he at once accosted her: "It's a fine day, Jeannie."

"Aye, Willie, it's turned out better than we expected, but the old proverb hauds true, 'rain before seven, clear by eleven.' Dye Water cam down drummly this morning. There must have been some rain in the west during the nicht."

"It's a lang walk ilka Sabbath for you to take when it's as close and warm as it is to-day."

"Oh, I never heed it. My faither is terribly strict, and would come every Sabbath if mother would let us. But she's troubled wi' the pains and cannot walk much further than the garden. You're handy to the kirk and nae doot take advantage of it. They say you have a grand herding. My faither and Johnnie Buchan often talk about it, and tell the other young herds to follow your example. Jimmie Luke, the farmer's son at Hoolet Ha' says there are few half-bred sheep that can touch yours."

"There's a good deal of balderdash about that. My faither was a grand judge of sheep. He left a grand flock, and although the maister hasna time to take as much interest as in the auld days, he never lets his bank book stand atween the ewes and their meat. Last Spring, when it was so cauld and dry, Matthie Craig, the steward, was nearly off his head driving cake and Indian corn from Gordon Station, when his horses should have been harrowing in the oats."

Without malice Jeannie was touching Willie on a tender spot, and when he bade her good-bye as he turned into his own house he was in a seventh heaven. As the Summer flew by on golden wings Willie was a constant attender at the Free Kirk. Jimmie Luke was also there, and

generally managed to sidle up beside Jeannie. Willie was insanely jealous, but he managed to conceal his feelings. Before long he had a call from the Auld Kirk minister whom he and his father and mother had sat under for years. As neither of the latter was able to walk, they only appeared on Communion Sabbaths, being taken down in a cart, so Willie did most of the worshipping for his family.

"Willie, I have noticed with some regret your absence from church lately, said the minister, solemnly.

"Yes, Doctor, I have been going to the Free Kirk this while back. Changes are lightsome. No but what I get a lot of spiritual consolation from your sermons, but Mr. Izzet is on the Apostle Paul just now, and he's making grand work of him. It's a pity but what Paul could appear again on Lammermoor, and give us a lesson on herding. Then coming back I meet Anderson, my neebor herd. He's a grand crack and a fine creetic of a sermon. He even amplifies Izzet, and that's saying a lot. I'll be back, Doctor, in my old place. A new broom sweeps clean, but it canna last for ever."

So the Doctor wisely changed the subject, and the wily Willie said nothing about Jeannie Smith.

The Summer drifted into Autumn. The purple heather became brown again. The Laird who came about the middle of August had departed. The bright October days charmed master and man, more especially as the draft ewes had topped the sale at Swan's Mart at St. Boswells. Life went on calmly under blue skies and fleecy clouds. The light and shadow on the hillsides varied occasionally by a passing shower made the month glorious. The crisp air put vigor into man and woman. On a Sabbath morning towards the end of the month Jeannie and her father were joined by Willie as they passed over the bridge. He had been there for half an hour waiting, and joy came into his heart as he saw their figures against the skyline on the top of the hill. He admired the easy swing of the girl, her cheeks glowing with health and native color, the frank look in her eye, the ease of her address as she laughingly said, "A braw morning, Willie," and then they passed up the avenue chatting gaily as they went. The young folks, as usual, drew away, leaving the father and Anderson behind. "This is my last Sabbath at kirk till next Summer," said Jeannie.

"I'll miss you, lass," and then, as if he had made a mis-step, he added, "You

and your faither are grand company."

That was as near as Willie could go, although he was burning to tell what his heart felt. There was a turmoil in his soul. He lapsed into silence for the balance of the way, and even Izet upon the subject of Paul did not arouse him from his lethargy. And then to make matters worse, Jimmie Luke annexed himself to Jeannie after the church came out, and walked all the way home with her, at least so Willie heard afterwards.

Winter blasts swept across Lammermoor. Soft snows hung to the great pine trees and many a morning it looked like fairy land, braids of silver on the dark branches flashing diamonds as the sun touched with kindly glow the snow white prisms, blue skies looking down on mottled moorlands. Then it would change. The snow would go, and the little stream come down with swelling tide, rushing wildly over its rocky bed, charging through the bridge as if glad to be free from its birth place of moss hag and moorland. Through all the changing season and weather Willie worked harder than ever, the only solace the thought of the brown-eyed maiden by Dye's fair side. Once and once only during the Winter he saw her. He went over Old Year's night with Anderson to a tea drinking at the Smiths, but Jimmie Luke and other young fellows were there, and aside from the general gaiety Willie could get no chance to push his suit. But on leaving he got a kindly squeeze of the hand, a glance that gave him hope. Spring came and the ewes were in the lambing shed. The time was at hand when the shepherd's skill and endurance told in his master's interest. Every minute was of value. As the lambs came the mother and progeny were housed for a day or two, and then as space was required for new arrivals the older lambs had to be driven to the new grass fields, and being contrary creatures in their youth, it took patience and skill to work them from the shed to their new homes. Anderson, whose lambing came later, was a daily visitor, giving a helping hand for an hour or two during midday. In the course of conversation he said:

"Willie, if you dinna look sharp Jimmie Luke will get that dochter of Andrew Smith's before you can say 'Jack Robinson.'"

To which Willie replied in his broad Doric: "D'ye think I would neglect the Maister's yows for ony lass that lives. Na, na, I'll take chances till the lambing's ower before I go coorting again."

The lambing was over and Willie was thinking over many plans how to make an had the finesse and address of his old school companion, Jimmie Luke, it would onslaught on Jeannie's heart. If he had have been easy. Jimmie seemed to approach and make up to a lass without trouble. Talk about water running off a duck's back. That was just as simple as Jimmie approaching a new girl. It was left out of the young shepherd's nature. He was "blate," as the Scotch say, and yet in his heart there burned a fire fed by love and passion, a touch of poetic fervor adding to the fuel.

One morning in the first week of May, coming out of his cottage after his breakfast, the sheep having been "looked" early in the morning, he saw a horseman coming up the "entry," as the road was called, which led from the main Duns-Lauder road to the farm place. Though far away he knew at once that it was Kynoch, the Greenlaw doctor. He came bowling along on his well known black horse at a hand gallop, man and horse in perfect touch with one another. As he came up to Willie the horse naturally slackened his pace. Long experience told the dumb animal that his master wanted a few words with every passer-by in these scantily populated parts.

"What's doing, Willie?"

"Nothing out o' the ordinary. A fine crop of lambs. The season's a bit cauld and dry, but we have a few cart loads of turnips left, and the maister's a grand hand at keeping a pickle cake in the granary. Where are you bound for the day?"

"I am on the road to Andrew Smith's. He says the daughter is complaining."

Willie gave an involuntary start as the doctor's heel touched his horse's side and it broke into an easy canter. Every other day for two weeks Kynoch kept passing the Washing House. Willie could find little out about the girl. "She's gey sair off, but she feels a bit better the day," was about all the satisfaction he got for his pains. One afternoon he did not come back as usual. Three o'clock came, 4, and then 5, and still no doctor. Willie got into a fierce state of inward excitement, and after his tea he started staff in hand and his Collie Laddie by his side determined to find out for himself how affairs stood at the Smith cottage. He sprang the hill like a deer, half walking, half running, passed the steading, but at Anderson's house at Crawlaw he tarried to give them a call. He was invited to take a cup of tea, but excused himself, having had one before he left his own house. He got

worse news here. Anderson had been over to ask for the Smith lass in the morning.

"She's unca bad with the fever and I doot her hour is approaching. It's naething for auld folk to be taken, but I am sorry when youth with life and joy before them have to leave this bonnie world, but there's aye shadow where there's sun-shine."

Anderson saw the strong man's bosom heave, a tear trickled down his cheek, the pathos of silent grief was written in his face, the misery of knowing not the future added to the mental climax that was well nigh driving him crazy.

But his action saved the day. He grasped his stick and strode away up the road by the old wood side. Passing it, he struck across the heather by Twinlaw side and the Watchburn, till he reached the Dye. From a steep bank he saw the cottage by the river's bank, a peaceful place with a streak of smoke curling heavenwards, and a smell of peat reek making the evening air fragrant. In that silent cottage lay Jeannie. During the sharp walk he had gathered his wits. He sat down to think and watch for any movement about the cottage. The sun sank behind the western hills and the soft twilight was slowly melting into darkness. There was a light in the cottage, so gathering up courage he went down and gently tapped at the door. The doctor opened it. Willie was not astonished, but Kynoch was, and he expressed himself a bit roughly.

"What in the devil are you doing here, Willie?"

"Only to speer for Jeannie. Tell me, Doctor, is there any hope?"

"The crisis comes at midnight," and then with kindly tone, he said:

"She is facing it bravely, and that gives me hope. I will tell her, Willie, that you came over and asked for her."

Then turning as if for home he went back to where he had been sitting. The stars came out, a big moon came rising over the Rawburn edge, a cool breeze coming from the sea-chilled air, but Willie moved not. With his head between his hands he sat for several hours. Then nature asserted herself, and stretching out amid some long heather he slept, dreaming of Jeannie tripping across far off fields where meadow larks sang and the curlew shrieked. When the quivering dawn came he woke up. The light was still in the cottage. An hour by sun-up the doctor came out, went to the byre, and in a few minutes mounted his horse. Laddie gave a bark of joy as his master turned towards

the road. He met the doctor at the brow of the hill.

"You're early astir, Willie. Did you go home last night after I saw you?"

"No, sir, I stayed by you clump of heather. My heart is in the cottage where you have been."

Then a great light flashed across the kindly doctor's vision. Once in the long away past he had felt the same passion, had thought of dreamy days under southern skies, where soft winds blow and mellow moons look down on snow-clad mountains, and vales where orange blossoms scent the air. Ah, but it was not to be, and he settled down amid the bleak moorlands of Berwickshire. Then looking at Willie, a touch of sadness in his voice:

"Last night I told her you were outside. She said nothing. Only a faint smile played over her face. Then she fell asleep, the first peaceful hours she had had for three weeks. At midnight she awoke refreshed. The crest of the wave has passed, and she is floating in calm waters now."

"Doctor, when I left you I went to pray. I wrestled till midnight among yon heather. I needed no pulpit or bedside. The canopy of Heaven seemed to place tongues of fire at my command. I left behind the hum-drum monotony of a Sabbath morning, and appealed with all my soul to that great Creator, that unseen Power that fills my soul with faith. Deep seemed to speak unto deep and mountain top to mountain top. In fact, as I went along there was an inspiration born that swept me along like leaves before the breeze. And strange though it be I never told Jeannie of my love. It is a flower that has been nursed in secret."

"Well, Willie, if she gets better, you will need to go over and 'speer' her."

Then, touching the reins, and pressing his foot against his horse's side, the doctor broke from a jog trot into a canter, and soon disappeared over the hill top. When Willie, after looking his sheep, got home, he met a crying mother. Her boy, as she still looked upon him, had never spent a night from home, and her husband could not console her. She was sure something had happened to him. Grief turned to joy as she dished out porridge for her son. As a great treat she brewed a cup of tea also, and served this with scones and butter. Then Willie opened his mind and told his mother the whole story, to which the father listened attentively, and when he was done blurted out:

"Ye muckle calf that ye are, why didn't ye tell the lass that ye were 'seeking' her."

Afore I kent your mother a week I was smacking her lips."

The days flew by. The doctor kept passing first every other day, then but once a week. It must have been six weeks after the above occurrence that he hailed Willie one day and told him that Jeannie was better, and he might call on her if he chose. That afternoon Willie started over the moor to Dye Water. His heart was full. What if Jeannie refused him? What if she took him? What about his father and mother in the latter case? His mind was in a hurly-burly state. No churning waves could equal it. But he had courage to press on. Kynoch's twinkling eye had given him hope. Jeannie's mother welcomed him at the doorway and showed him "ben the hoose." There in a big chair sat Jeannie, the roses gone. Instead, a spirituelle face worthy of a Madonna. The long illness had fined down the features. It was alabaster in place of pink. The silence was broken by a sob as Willie pressed her hand. Then recovering herself she said in a sweet low voice, "Willie, the doctor has told me all about your night on the hillside. You may kiss me, Willie. I am yours for ever."

Then mother and daughter broke into a low wall, half moan, half laugh, which only stopped when a few minutes after Andrew Smith came in from the hill and found out that Willie Wilkie's wooing had been successful.

URGING THE USE OF MUTTON.

On October 14 the following letter was sent by the secretary of the National Wool Growers Association to each of the forty-eight Agricultural Colleges of the United States.

Gentlemen:

The high price now prevailing for beef and pork is said to be placing meats beyond the reach of many American families. However, all of these families may, if they desire, find in mutton a cheap but highly desirable substitute for beef or pork. Mutton cannot only be substituted for these meats, but where our people learn to use it it proves more nutritious, more digestible and decidedly more palatable than any other form of meat food. In fact, in its intrinsic value at equal price mutton is superior to other meats.

Unfortunately, the American people have never learned to use mutton extensively like have the British people, and this is reflected by the fact that mutton

sheep command in England about double the price that they do in this country.

At the present time there is a wide margin between the wholesale price of dressed mutton and beef or pork. Last week the Chicago packers quoted wholesale prime dressed lambs at 11 cents to 11½ cents per pound, against 25 cents per pound for No. 1 beef ribs and 27 cents per pound for No. 1 loins. Dressed handy weight sheep were quoted at 7 cents to 8 cents per pound, and heavy weights at 6 cents to 6¼ cents per pound. Against this the cheaper cuts of beef, such as rounds and chucks, were quoted at 10½ cents to 12½ cents per pound.

These prices can indicate but one thing, and that is, that our people have not as yet learned the real merits of mutton as a food. It will probably be some time before any considerable reduction in the price of beef or pork can be obtained, but this country always can produce an adequate supply of the choicest mutton and lamb. As time goes on our people must more and more learn to depend upon this food for their meat diet. It therefore occurs to me that it is the duty of all institutions interested in the welfare of our agriculture, and in the welfare of the people as a whole, to do everything possible to encourage the use of mutton. I am satisfied that the agricultural colleges and experiment stations can exert a profound influence in this direction by publishing a bulletin dealing with the value of mutton as a food. And, therefore, in the name of the sheep industry of this country, I most respectfully urge that your institution, at as early a date as may be possible, prepare and issue such a publication.

I trust that you may be favorably impressed with this suggestion.

LABOR COST.

A South African stockman writes as follows:

Our laborers are all natives. We seldom employ a white man except in harvest or during potato planting, the white laborer being mostly absorbed by the mines, where they can make from \$1.10 to \$1.20 or over per day. Our natives cost us from \$9.50 to \$14.50 per month of 30 working days, with food, which consists, for the most part, of maize meal, vegetables, with meat once a week.

Is it any wonder that the sheep industry of the United States has rapidly declined every time the tariff on wool was removed or reduced?

Cheyenne, January 9, 10 and 11.

Markets: Past, Present and Prospective

By C. H. Shurte

NOTHING has been more inexplicable than the erratic course of the live mutton markets of the past year. Logic has been entirely lacking. While fat cattle have sold at \$10 @ \$11 per cwt., and good hogs anywhere from \$8.75 to \$9.40, choice lambs were appraised below \$7, and the best wethers that ever came off the Western range went to killers by the thousand at \$4 @ \$4.25. Such markets are outrageously out of line and are calculated to discourage producers. It has been a condition largely responsible for ruinous liquidation, which must eventually result in semi-famine supply conditions. All through 1912, with the exception of a few weeks, killers faced a feast and the inevitable sequence of feasts is famine.

During 1912 consumption of mutton, and that term means lamb, reached unprecedented volume in the United States. The year's marketing at five principal Western points will be around 12,000,000 head, about the same as the previous year, but in 1912 an unprecedented supply condition existed. Owing to superb feeding conditions on the range stock came to market fat and killers took at least 40 per cent more than their usual quota, the result being a limited delegation sent to cornbelt feed lots to be finished for the winter market. During the heavy range run of September and October sheep slaughter facilities at Chicago plants were so overtaxed that butchers were frequently 50,000 head behind buying operations. And yet this vast quantity of mutton went into immediate consumption and the first short run found packer buyers bidding clamorously for a fresh supply. Had the Western run carried a normal feeder end prices of fat stock would have ruled 50 cents to \$1 per cwt. higher all through the fall and summer months. This excess of killing grades explains to some extent why prices ruled low compared with other branches of live stock trade, and yet this explanation is unsatisfactory. The fact remains that the American people are eating mutton in prodigious quantities, otherwise prompt disposal of around 1,000,000 carcasses monthly, not to speak of Eastern slaughter, would have been impossible.

Perhaps the conspicuously unsatisfactory phase of 1912 markets was the unreasonably low level of sheep values. This

has been attributable to several causes among them heavy liquidation of aged wethers by Montana and cashing thousands of native ewes, the low-altitude region having scored another failure in lamb raising. An interminable procession of dry ewes ran marketward all through the summer and fall and pastures being luxuriant they came fat, gorging the market with that kind of mutton. Montana merely aggravated matters by sending a



HERDER AND DOG

flood of aged wethers, also fat, and most of the time sheep sold at any price were considered advantageously disposed of. So fat did much of this stuff come that while killers were burdened with material feeders could not satisfy their needs and thin sheep claimed a premium. The heavy run of Montana implies an effective reduction of flocks in that state rendered imperative by contraction of range consequent on settlement, and gives

promise of supply paucity in the future. Illustrative of how strenuous this liquidation has been is the fact that while John B. Long is said to have wintered 150,000 head in 1910-11, during the coming winter he will carry over but 50,000. Facing these facts it is obvious that no such congestion as that witnessed at the stock yards during the past year will be possible during the next half decade. The heavy run of dry native ewes means that Illinois, Indiana, Iowa, Missouri, Ohio and adjoining states have again concluded that lamb raising is not feasible and warrants Western growers in expecting not only less competition from Eastern growers in the future, but still more insistent demand from that source for feeder grades.

Another phase of the 1912 market calculated to encourage growers was relegation to the junk pile of the bargain counter on which ovine trash has heretofore been displayed. Cull lambs have at all times been in request at prices relatively higher than fat stuff realized. Such half fat Western lambs as feeders balked at taking, fine woolled stock were eagerly taken to augment mutton supply, whereas in other years they were peddled by the head at absurdly low prices. Old ewes, formerly sold at 75 cents to \$1 per head, have been courted at \$2.75 @ \$3 per cwt., and the health of the trade in flotsam and jetsam has aroused surprise.

One lesson taught by 1912 markets is the impropriety of maturing wethers where fat lambs can be raised in the West. While mutton lambs cannot be raised on dry ranges, breeders in a position to market young stuff should adopt that policy. A lamb under present and prospective market conditions nets more than an aged wether, in fact most of the Idaho lambs reaching Chicago and Omaha during the past season actually netted more money than Montana wethers. In the evolution of production lambs will be the rule, wethers the exception. Growers may as well conclude now as at any time that the American consumer does not want heavy mutton, but it is improbable that lamb production will ever be overdone. New York needs around 100,000 lamb carcasses every week of the year, Philadelphia 50,000, Boston 40,000, and Chicago as many more. Baltimore and Washington consume 50,000 lambs weekly be-

tween them and the demand will be accentuated by scarcity of beef and pork. Twenty years ago 75 per cent of the ovine stock marketed in the United States was matured; under new conditions the market needs not to exceed 25 per cent of sheep. In maturing wethers hereafter mutton must be regarded as a by-product of wool and valued accordingly.

In recounting 1912 market events the lamb crop of the middle South must not be ignored. This crop is produced mainly in Kentucky, Tennessee and Virginia and is the only area east of the Mississippi river in which the sheep industry is thriving. While the Southern crop was smaller than usual owing to the same meteorological conditions that restrained Western production, it reached market in superb quality and prevented a famine during the period between fed and grass stuff. These Southern lambs sold on the Louisville, Cincinnati, Philadelphia, and Jersey City markets at \$7 @ \$7.75 and demonstrated the possibilities of wool and mutton production over a vast area where the cuticle of production capacity has not even been scratched.

Marketing in 1912 demonstrated how dependent Eastern consumers are on Idaho ranges for a summer supply of lambs. Probably 75 per cent of the crop came from that state and the proportion of fat stuff was the largest in market history. They were big dressers, yields of 55 to 59 per cent being the rule, and their superb quality was probably responsible for an actual demand for lambs carrying less flesh. Oregon and Washington sent some excellent lambs and about 50,000 Californians came through to Chicago to sell at \$7 @ \$7.50. In this connection a little mild criticism of Western marketing methods may not be out of place. The average Western breeder commits the error of holding his lambs too long under the impression that he is thereby getting the advantage of extra weight, an exploded illusion. The time to ship a lamb is before it loses its milk fat, and too many come to market subsequent to that state. Early weaning is better for the ewe and lamb alike and general adoption of that policy would avoid much of present market congestion.

Another phase of 1912 marketing has been conspicuous scarcity of yearlings. In previous years lambs have been closely gathered and liquidation of old ewes made retention of yearling ewes imperative. A load of good Western yearling ewes has

caused mild commotion at all times in market centers as they have been worth relatively, if not actually, more on the range. Feeders accustomed to handling yearlings have been unable to satisfy their needs and most of the time insufficient yearling stuff was available to make a reliable set of quotations. This will probably be a permanent market feature.

Summarized markets of 1912 have been noted for liquidation of Western sheep and native ewes. A lamb crop somewhat short in numbers, but of superb quality, the result being serious deficiency in feeder supply; low level of sheep values compared with lambs; an excess of weight, putting a premium on light stuff and trash; high prices for pelts, and an abnormally light feeder movement. The year has witnessed close marketing of lambs and a general cleaning up of aged wethers, notably by Montana. The crippled condition of Wyoming, consequent on two bad winters, sandwiching a dry summer, has been evidenced by meager receipts from that quarter and the emphatic manner in which farmers east of the Mississippi river have been getting out of sheep suggests that consumers will be even more dependent on the West for their mutton supply hereafter.

Market prospects for 1913 are obviously more luminous than it was possible to cast a trade horoscope a year ago. A liberal estimate is that 40 per cent less thin Western stock has gone into cornbelt feeders' hands than last year. Colorado may feed to the limit of its capacity and not create an oversupply, but there is this danger to be apprehended. Taking their cue from market actions during the early part of 1912 feeders have put in light lambs. The first three months of 1912 were disastrous to feeders, owing to full liquidation consequent on hay scarcity and the high price of corn, and the winter was well worn away before prices became remunerative. Feeders this year are playing the market to repeat, always bad policy and many of them are aiming for May prices, having put in light lambs with that object. Usually the market reverses the course of the previous year and it is not improbable that high point in the mutton crop of finished mutton will be attained in March, a low period in 1912. For the Western lamb grower 1913 prospects are bright. There will probably be no excess of sheep, increasing consumptive demand for lamb, the native crop of lambs will be at least 50 per cent

less and liquidation is at an end. The hog crop has been decimated by disease and the pork chop last winter when hogs were on a 6-cent @ 6½-cent basis was a keen competitor of lamb and mutton. At the close of the year 1912 trade sentiment is decidedly bullish regarding values of everything produced by the sheep owner.

WIDER USE OF MUTTON.

On October 21 the following letter was sent to the mayors of 150 large Eastern cities.

My dear Mr. Mayor:

Knowing that you have at heart the welfare of the residents of your city, I beg the liberty of calling to your attention a matter that will prove of unusual benefit to your people.

At the present time beef and pork are retailing at high prices, due to a temporary shortage of cattle. However, mutton and lamb are selling at low prices, due to an over-supply of sheep which will continue for some time. If the attention of your people could be attracted to mutton relief from oppressive prices would immediately be forthcoming. While mutton is low in price it is fully equal to beef or pork in its nutritive value, and is superior to either of them in digestibility and health building qualities. The sheep is the only meat producing animal that does not suffer from tuberculosis. This fact is proven by reports of the United States Bureau of Animal Industry.

The Chicago packers last week were wholesaling dressed lamb at 11 cents to 11½ cents per pound, and dressed prime mutton at 6 cents to 8 cents per pound. With the wholesale price so low the retail price must be correspondingly low. Therefore, if the people of this country knew these facts they could at once materially reduce their meat bill which ultimately would have the effect of reducing the price of all meats.

Trusting that you may deem it wise to call this question to the attention of your people, and thanking you for any interest you may take in this matter, I have the honor to remain,

Very truly yours,

National Wool Growers Association,
S. W. McClure, Secretary.

Procrastination is the thief of time, but applied to improvement in the sheep industry it is the thief of profits.

SHEEP SHOW MISSOURI STATE FAIR.

The Missouri State Fair of 1912 was conceded to be one of the best fairs ever held. The quality throughout was good and the competition strong enough to be interesting.

The sheep judging was delayed until Wednesday afternoon on account of Messrs. Andrews and Harding's flocks being delayed enroute from Memphis. Geo. McKerrow & Sons failed to appear.

In the Shropshire classes, Don Green of Oakland, Illinois, took most of the money. His showing was mostly of home-bred stuff, but it was a fine lot and well fitted. The University of Missouri took first and Champion on a yearling ram bred by them. In the Missouri Shropshire classes, W. S. Sneed of Sedalia, carried off first on aged and yearling rams and second on ram lambs; also taking the "blue" on the aged ewes, ewe lambs and flocks. J. O. Groves of Tipton, Missouri, took first on ram lambs and all the ewe classes. Healsohad Champion ram and ewe to his credit. Eugene Herndon, one of the new Missouri exhibitors, was second on aged rams, yearling rams and ewe lambs. Mr. J. A. Winebrenner was third on aged rams and ewe lambs.

The Missouri classes lacked the fit and finish of Show Sheep, but the quality and quantity was quite an improvement over last year and it is hoped that the breeders will come back next year with still greater improvement.

In the Missouri Hampshire classes, Frank Sherwood of Shelbyville, Missouri, took everything in sight; he had a good showing of home-bred stuff and Missouri needs more flocks like his. In the Hampshire open classes, Walnut Hall Farm, with Robert Blastock in charge, annexed all the "blues" and most of the "reds" to his string; allowing Geo. Allen of Lexington, Nebraska, third on yearling rams and second on aged ewes.

In the Oxford classes, T. J. Burris of Prairie Home, Missouri, was the only exhibitor in the Missouri classes. His sheep lacked the fit and finish of Show Sheep, but were a good growthy and field stuff. In the open classes Geo. Allen had little trouble in carrying off most of the money; only allowing Mr. Burris first on pen of four lambs.

The Cotswold classes were of extremely good quality, most of the stuff being bred by the exhibitors. Mr. Tom Groves of Tipton, Missouri, carrying off practically all of the money in Missouri classes, in the open classes his only competitor being Geo. Allen, who divided the spoils with him. In aged rams and yearling rams, Groves took first and second with Allen third. In the

enough pressure can be brought to bear upon the board and give classes to them.

In the Rambouillet class, F. S. King took "blue" and Champion on "Wyoming Boy" in the aged rams. He also took the "red" with E. M. Moore third. In the yearling rams, Moore was first, King second and Scott third. In the ram lamb class, F. S. King took all the money; in the ewe class, King was first, F. W. Cook second, and Moore third. On aged ewes and yearling ewes Cook was first with King second and third. In the ewe lambs, Moore took first and third with Scott second. King won flock, pen of four lambs and Champion ewe.

In the Delaine-Merino classes, E. M. Moore was first, W. N. Cook second and Uriah Cook & Son third on aged rams. On yearling rams and ram lambs, W. N. Cook took all the money. In the ewe classes, Uriah Cook & Son took first and third on aged ewes, first and second on yearling ewes and first and second on ewe lambs; Moore getting second on aged ewe, third on yearling ewe, and third on ewe lamb. E. M. Moore was first on flock, Uriah Cook & Son second. Moore had the Champion ram and Uriah Cook & Son the Champion ewe. W. N. Cook & Son won both moneys in the pen of four lambs.

The ribbons were tied by E. D. King in the fine-wool classes and

"Dick" Stone in the mutton classes.—Howard Hackedorn, University of Missouri.

CO-OPERATION.

Some of the public spirited citizens of Portland, Oregon, some months ago started a co-operative grocery store in that city. It is now reported that after the store had been in operation about eight weeks it paid a dividend of eight per cent. This store was started under the patronage of the city government and has proven of immense benefit to its patrons. Every city should establish similar stores for herein lies the solution of the high cost of living.



FIRST PRIZE SHROPSHIRE RAM—MISSOURI STATE FAIR—BRED AND OWNED BY MISSOURI AGRICULTURAL COLLEGE

ram lambs, Mr. Allen was first and Mr. Groves second and third. In aged ewes and yearlings ewes and ewe lambs, Allen was first and third with Mr. Groves second in each class. Allen won flock and Champion ewe, while Mr. Groves was second on flock and Champion ram. The pen of four lambs went to Mr. Groves.

The fine wool show was better and larger than ever. It is only to be regretted that the American Royal Live Stock Show does not appreciate the importance of our fine-wooled sheep. If classes could be arranged for them at this show it would give the "fine wool" exhibitors an opportunity to make the circuit as do the other sheep men. It is to be hoped that

NEW WOOL RATES.

The wool growers from time to time have read in the pages of this paper of the progress that was being made in the suit instituted by the National Wool Growers Association before the Interstate Commerce Commission for a reduction of all Western freight rates on wool. It is unnecessary to again here review this case, except to state that the National brought the suit early in the year 1911, and after it had been bitterly contested on the part of the railroads and ably defended on the part of the National Wool Growers Association the Commission handed down, on April 12, 1912, a decision ordering a reduction in practically every wool rate then in existence from Western points to Eastern markets. The order of the Commission became effective June 1, 1912, and much of this season's wool moved under the new rate, and it is believed that the Interstate Commerce Commission will order reparation on all wool shipped this year, so as to give the full benefit of the new reduction.

Below we submit the rates from the principal wool shipping points in the Western States to Boston. These rates are for wool in sacks, but where wool is shipped in bales the Commission has ordered a rate 15 per cent lower than the rate we here give.

The reduction in the rates on Oregon, Western Idaho, Nevada and Western Arizona wool was not as great as we anticipated, and, therefore, the Association, on September 16, 1912, was heard by the Interstate Commerce Commission in an appeal for a further reduction from these sections. The Commission now has this question under advisement, and we anticipate a decision in the near future which will result in materially reducing the rate from these points.

It is of course impossible to accurately tell how much this reduction in rates is going to save the Western wool growers, but a careful tabulation indicates that the saving will not be less than \$500,000 per annum, and if the wool can be shipped in a baled condition it will be decidedly greater than this.

Arizona.			
Station	Old Rate	New Rate	Reduction
Ash Fork	\$2.02 1/2	\$1.86	\$1.6 1/2
Flagstaff	2.02 1/2	1.82	.20 1/2
Holbrook	2.02 1/2	1.74	.28 1/2
Navajo	2.02 1/2	1.72	.30 1/2
Winslow	2.02 1/2	1.78	.24 1/2

Idaho.			
Station	Old Rate	New Rate	Reduction
American Falls...	\$2.13	\$1.78	\$.35
Arco	2.13	1.84	.29
Bancroft	2.13	1.76	.37
Blackfoot	2.13	1.80	.33
Bliss	2.13	1.90	.23
Gooding	2.13	1.88	.25
Kuna	2.13	1.96	.17
Lost River	2.13	1.86	.27
McCammon	2.13	1.76	.37
Minidoka	2.13	1.82	.31
Montpelier	2.13	1.74	.39
Picabo	2.13	1.90	.23
Pocatello	2.13	1.76	.37
St. Anthony	2.13	1.86	.27
Shoshone	2.13	1.86	.27
Soda Springs	2.13	1.76	.37
Spencer	2.13	1.88	.25

Montana.			
Station	Old Rate	New Rate	Reduction
Bigtimber	\$1.75	\$1.52	\$.23
Billings	1.75	1.46	.29
Chester	1.80	1.51	.29
Culbertson	1.60	1.27	.33
Durham	2.00	1.61	.39
Forsyth	1.65	1.38	.27
Garrison	1.85	1.68	.17
Glasgow	1.65	1.35	.30
Glendive	1.50	1.28	.22
Great Falls	1.80	1.57	.23
Harlem	1.75	1.43	.32
Havre	1.80	1.47	.33
Livingston	1.80	1.56	.24
Miles City	1.65	1.34	.31
Mondak	1.50	1.23	.27
Terry	1.55	1.32	.23

Nebraska.			
Station	Old Rate	New Rate	Reduction
Allamore	\$1.72	\$1.23	\$.49
Chadron	1.47	1.23	.24
Crawford	1.72	1.29	.43
Harrison	1.51	1.29	.22

New Mexico.			
Station	Old Rate	New Rate	Reduction
Albuquerque	\$1.93	\$1.54	\$.39
Carlsbad	1.93	1.60	.33
Chaves	2.07 1/2	1.64	.43 1/2
Cubero	2.02 1/2	1.60	.42 1/2
Las Vegas	1.93	1.44	.49
Raton	1.75	1.34	.41
Roswell	1.93	1.54	.39
Springer	1.78	1.38	.40
Watrous	1.93	1.42	.51
Wingate	2.02 1/2	1.66	.36 1/2

South Dakota.			
Station	Old Rate	New Rate	Reduction
Aberdeen	\$1.99 1/2	\$1.51	\$.48 1/2
Edgemont	1.72	1.33	.39

Wyoming			
Station	Old Rate	New Rate	Reduction
Border	\$2.13	\$1.72	\$.41
Bosler	2.04 1/2	1.40	.64 1/2
Casper	1.68	1.39	.29
Cheyenne	1.72 1/2	1.32	.40 1/2
Cokeville	2.13	1.70	.43
Daley's Ranch...	2.04 1/2	1.46	.58 1/2
Douglas	1.57	1.35	.22
Ft. Steele	2.04 1/2	1.46	.58 1/2
Gillette	1.89 1/2	1.43	.46 1/2
Green River	2.04 1/2	1.58	.46 1/2
Hanna	2.04 1/2	1.44	.60 1/2
Kemmerer	2.13	1.66	.47
Lander	1.76	1.51	.25
Laramie	2.04 1/2	1.38	.66 1/2
Lusk	1.53	1.31	.22
Moorcroft	1.89 1/2	1.41	.48 1/2
Rawlins	2.04 1/2	1.46	.58 1/2
Sheridan	1.89 1/2	1.51	.38 1/2
Spencer	1.77	1.35	.42
Wolton	1.72	1.45	.27

Colorado.			
Station	Old Rate	New Rate	Reduction
Denver	1.72 1/2	1.32	.40 1/2
Trinidad	\$1.72 1/2	\$1.32	\$.40 1/2
Utah.			
Cache Junction...	\$2.13	\$1.76	\$.37
Logan	2.13	1.76	.37
Milford	2.11	1.92	.19
Modena	2.35 1/2	1.96	.39 1/2
Oasis	2.11	1.84	.27
Ogden	2.13	1.76	.37
Perry	2.13	1.76	.37
Salina	2.13	1.80	.33
Salt Lake City...	2.13	1.76	.37
Tooele	2.11	1.78	.33
West Weber....	2.13	1.78	.35

RESULTS OF HOME MARKET.

As a practical demonstration of what a home market means, a well known farmer of Park City, Montana sold to the Billings Packing House October delivery 50 head of hogs for which he was paid a little more than \$1,000. The hogs averaged a trifle over 250 pounds each and the price paid was eight cents per pound. A shipment of a carload of Montana hogs from Huntley, Montana, barley and alfalfa fed which topped the Chicago market March 12, 1912, and created a furore among the raisers of corn fed hogs of the middle west, sold for only \$7.95 per cwt. It will be interesting to the farmers everywhere to know that the Park City hogs had the range of an alfalfa field during the summer and were penned 40 days during which time they were fed a mixed ration of sugar beet syrup and ground wheat and sugar beets. The sugar beet syrup and ground wheat were mixed in the following proportions: 100 pounds of syrup and 444 pounds of ground or cracked wheat to which was added 256 pounds of water, making a total of 800 pounds which with 500 pounds of raw sugar beets comprised the daily ration for the fifty head of hogs. The sugar beets were fed separate, that is did not form any part of the syrup and cracked wheat mixture. After the first 20 days the hogs gained two and a half pounds per day in weight. The total cost of the ration fed to the hogs was \$6.44 per day, while the gain figured on the price at which they were subsequently sold amounted to \$10.00 per day. In other words this farmer for a period of 20 days was making a net profit of \$3.56 per day over and above the market price of feed which was as follows: Sugar beet syrup, \$10 per ton; Wheat (soft) 60 cents per bushel at the farm; and sugar beets at \$6.00 per ton, the average factory price.

Why is Mutton Unpopular

By James E. Poole

JOHN B. Long, the Montana flock-master, and Robert Matheson, Swift's sheep expert, lunched at one of Chicago's gilded caravansaries recently. Conning the menu Matheson remarked: "English mutton chops at a dollar a throw. Suppose we help the game along by ordering them". Long coincided and after the tedious wait customary in such places the waiter placed on the table two single chops reposing on silver platters. Eyeing his portion suspiciously, Matheson remarked: "That chop was cut from the kind of ewe carcasses we are trying to sell at six cents a pound."

Now, properly speaking, that incident did not indicate high cost of living, but cost of high living, and yet it gives an inkling of why the public is not eating mutton even at absurdly low prices. Why this excellent meat has not found favor with the consumer with fat sheep selling at \$4 to \$4.25 per cwt., and good carcasses available at \$6 to \$7 per cwt., is a puzzle calculated to tax the proverbial ingenuity of a Philadelphia lawyer. The press has proclaimed the fact that sheep were cheap and mutton ought to be, loud and long, with no perceptible effect. The public wants little of it and weight and quality has been at all times a handicap to a

sheep in the selling stage. Inquiry throws some light on the subject, but even the information available is unsatisfactory. The fact remains that both in Europe and America lamb is growing in favor, while the mature article is required in decreasing quantities annually. The moral is obvious: The grower must furnish what the market demands most. For twenty years past demand for lamb has been increasing while consumption of heavy mutton has been on the wane. In the evolution of the trade yearlings and aged wethers will be less conspicuous in the supply. Dry ewes and wethers from dry grass areas in the West where milk lambs cannot be raised will furnish all the heavy mutton needed. Twenty years ago supply at Chicago carried 75 per cent of sheep and 25 per cent of lambs. During the past year these proportions have been reversed and even then killers were constantly in a dilemma regarding disposition of heavy mutton.

Supply conditions during 1912 were to some extent abnormal. Texas began filling the market hopper early in the season, inaugurating a condition of demoralization that was maintained all through the year. Montana took up the deluging pro-

cess where Texas left off, and other sections of the Northwest also liquidated in somewhat lavish manner. To make things worse a bad winter resulted in thousands of dry ewes east of the Missouri river and as these got fat they were sent to market, the result being more heavy mutton than a limited dressed trade could digest. High cost of cattle and hogs prompted retailers to put a heavy tax on mutton, it being an open secret that both killers and distributors made their profits out of lamb and mutton all through 1912. Stock and prices were low, but retail charges failed to indicate the fact. Cheap mutton was a mere chimera at all times. The audacity with which marketmen substituted yearling and light wether product for lamb at lamb prices is astounding, some of them exploiting its weight as evidence of superiority. That the consumer did not get the benefit of low mutton cost is a statement not open to dispute. So far as the public is concerned there has been neither cheap mutton nor semblance of it. In any campaign of education to popularize mutton undertaken by sheep growers it will be necessary to exploit the disparity between stockyard cost and retailers' charges.

Expert testimony on the subject is not



uninteresting. Robert Matheson, the Swift expert, will be regarded as a competent witness. Asked the reason why, he replied: "Because the public doesn't like heavy mutton," in a seek-no-further manner. "Up-to-date demand is emphatically for lamb" he continued, "not only in America but across the Atlantic. We hear much about mutton popularity in England, whereas the reverse is the case. Once upon a time the Englishman liked heavy mutton, but his taste has changed. If it were otherwise we could have exported a lot of stuff this season, but that outlet was closed."

"How can present market conditions be remedied," he was asked.

"By offering the public less heavy mutton," was the response. "What's the use trying to force the sale of a depopularized article? Hasn't the butcher pig displaced the fatback hog in popularity and the pony steer become the favorite kind of cattle? Why even the heavy lamb is handicapped in the distributing process. And there's another thing sheep growers must reckon with. All sheep are not alike and neither is mutton. We have handled old wethers by the hundred thousand this summer that were fit for food only by stretching the imagination. Aged stuff wholly devoid of mutton quality is not convertible into easily merchandised product. It is stringy, bad-colored, tough and unsavory. My only wonder is that the public takes it at all."

Frank J. Hagenbarth, of Idaho, blames the bad quality of much of the mutton placed before consumers for its unpopularity. Said he: "When confidence in any commodity is destroyed reinstatement is difficult. The consumer may forget the price, but he retains a vivid recollection of unpalatability and bad odor. For that matter you can't blame him. Last winter I dined with a Chicago acquaintance and as a compliment to me roast mutton was the principal dish. It happened to be a joint from a pulp-fed animal and the odor was indescribable. I'll wage any sum that mutton will never have a place in the dietary of that family again and I never want to encounter any more such stuff. The pulp-fed sheep has done more to injure the reputation of mutton among consumers than anything else. I expect this statement to provoke indignant protest from the pulp feeders in chorus, but I make it advisedly and am prepared to stand by it. After the consumer gets a dose of such stuff he usually eliminates

mutton from his list of eatables entirely and the whole industry is damaged. We have made lamb the most popular meat in the country, but the fact might as well be recognized now as at any time that inferior mutton is not wanted by the American consumer and never will be. Much of the mutton marketed from the range country is merely by-product of the wool industry and must be rated as residue. The grower must charge off depreciation if he practices business methods."

A. J. Knollin points to the fact that sheep prices rule better during cold weather than when temperatures are high. "To get maximum results from sheep it will be necessary to cease flooding the



LEG OF MUTTON

summer market with that grade of product," was his topical assertion. "That the public does not want heavy mutton in hot weather must be obvious to everybody." This raises the problem of how fat grass sheep can be carried over from the range marketing season into winter. Some Ohio operators are experimenting in that sphere now. All last fall they bought sheep in good killing condition to run on blue grass pastures and later in cornfields, expecting to recoup themselves by increase in value and added fertility to their soil, even if gains are not adequate. Experience has demonstrated that, unpopular as heavy mutton is, a lim-

ited quantity is always needed and that when supply of fat sheep falls below market needs, the gap between sheep and lambs promptly narrows. Public institutions consume large quantities of mutton and an advance of a cent a pound in dressed cost does not curtail this demand, as it is the cheapest meat available for feeding paupers, convicts and other public charges.

Much stress has been laid on the fact that American cooks lack ability to properly cook mutton. Let it be accepted as an axiom that other than as roasts or chops, mutton, and also lamb, will be consumed in very limited quantities now and hereafter. Hotel and restaurant men say that ragouts, fricassees and other European dishes of palatable nature do not appeal to Americans. They are even suspicious of being served refuse from former serving. The average American is a chop eater and every mutton does not make an acceptable chop. Watch the average restaurant diner eating any meat and the care with which he discards fat will be apparent. This waste has no place in the supply of edible fats and goes into soap grease, whereas in Europe it is subsequently rendered in palatable form for use as butter substitute. Even in England "dripping," as it is known commercially, a combination of various fats, is the common "bread spread" of countless thousands, and for that reason cooks do not discriminate against fat, as the waste is their perquisite.

Conditions must be accepted as they exist, except where changes are effective and any student must realize that the American people will want less mutton in the future than in the past. For lamb consumption possibilities are illimitable. As most Western flocks are being rapidly put on a mutton basis it is more than probable that the wide price range between lambs and sheep will eventually narrow, as a limited quantity of mutton will be needed at all times. More lamb and less mutton should be the aim of the grower, however, and marketing of heavy sheep during the season of high temperatures should be reduced to the smallest possible volume. There will always be a certain percentage of old wethers to be cleaned up annually in territory where wool raising is a speciality and these must be regarded as by-product. These wethers and dry ewes will furnish an adequate supply of heavy mutton. That the retailer can be cured of his extortional practices is doubtful. His policy

is to tax the consumer all that traffic will bear, a short-sighted one perhaps, but one that has the sanction of long practice. Liquidation has been responsible for an abnormal supply condition and abnormalities are always transient. A campaign of education, having for its object elucidation of methods of palatably preparing mutton would be expensive and of doubtful outcome, for the consumer is as strongly attached to his culinary and gastronomic preferences as is the retailer to his extortionate practices. The obvious remedy lies in furnishing more lamb and less mutton.

SHEEP EXPORTS.

During the twelve months ending June 30, 1912, the United States exported 157,263 live sheep, valued at \$626,985. Nearly all of these sheep were sent to Canada or England, those going to the latter country were all slaughtered on the dock on arrival. For the year ending June 30, 1911, we exported 121,492 live sheep, valued at \$626,272.

A CORRECTION.

In the October issue of this paper, on page 19, under the title "Wool Grease," we stated that there was but one firm that made a practice of recovering wool grease in this country. Since then a gentleman in Philadelphia has called our attention to the fact that this was an error, and that there are now in the United States at least four large firms that make a practice of recovering wool grease, and possibly several others. The American Wool Degreasing Company of the Arcade building, Philadelphia, has a machine for degreasing wool that removes all the wool grease by naptha in a thoroughly safe way and recovers every ounce of this by-product instead of losing it as has occurred in the past. The facts seem to indicate that wool degreased by this process yields a greater percentage of tops and lesser percentage of noils than wool that has been scoured by the ordinary process. The difference in favor of the naptha process is of sufficient size to be worthy the attention of all wool manufacturers.

The same gentleman who called our attention to an error relative to wool fat, refers to an article on page 40 under the title of "London Wool Sales" as follows:

In London every bale of every lot offered

for sale is shown invariably in warehouses, and every bale is cut at one corner to allow wool to be drawn out. If a buyer wishes to see further he is at liberty to cut down the entire side of a bale or bales. If there are one hundred bales in a single lot there

EXECUTIVE COMMITTEE National Wool Growers Ass'n.

ARIZONA
HUGH CAMPBELL, Flagstaff
CALIFORNIA
F. A. ELLENWOOD, Red Bluff
IDAHO
F. J. HAGENBARTH, Spencer
ILLINOIS
W. W. BURCH, Chicago
INDIANA
J. E. WEBB, Southport
IOWA
V. G. WARNER, Bloomfield
KENTUCKY
W. T. CHILTON, Campbellsburg
KANSAS
E. E. HAZEN, Hiawatha
MICHIGAN
C. E. LOCKWOOD, Washington
MINNESOTA
MAGNUS BROWN, Farmington
MONTANA
E. O. SELWAY, Dillon
NEBRASKA
ROBERT TAYLOR, Abbott
NEVADA
THOMAS NELSON, Stone House
NEW MEXICO
H. F. LEE, Albuquerque
OHIO
S. M. CLEAVER, Delaware
OREGON
GEORGE M'KNIGHT, Vale
TEXAS
B. L. CROUCH, San Antonio
UTAH
PETER CLEGG, Tooele
VERMONT
E. N. BISSELL, East Shoreham
WASHINGTON
F. M. ROTHROCK, Spokane
WEST VIRGINIA
S. C. GIST, Wellsburg
WISCONSIN
ARTHUR STERECKER, Manitowoc
WYOMING
J. A. DELFELDER, Walton

are one hundred bales shown for examination. The wool is sold at 4 p. m. on the same day as shown, not on the following day. There are frequently lots of wool offered of unattractive style on which no "wild chorus bursts forth," but when the auctioneer has much difficulty in teasing out a single bid. It is unusual for more

than ten bidders to be shouting at once. There are few "brief moments" of silence between sales when good wool is offered, the running of one lot's bidding into that of the next without interruption is so confusing to newcomers that it is difficult to follow what lot is being sold each moment of the session.

Few, if any, Americans do their own bidding. They employ brokers mostly Londoners, who are regular bidders on the exchange, and who in addition attend to shipping, insuring and banking for their clients.

A large quantity of American purchases are of 36s, 40s, 44s, grades which are coarser than anything we have here save common and braid and the supply of these is scarcely "plentiful."

LABOR COST IN A SUIT.

We have repeatedly asserted in this paper that the tariff reached only to the men who produce the wool and those who manufacture it into cloth, and that it did not reach and could not be made to reach the man who made the cloth into the suit, or the one who sold the suit to the consumer. The writer is wearing a suit of clothes that cost \$36, the cloth in which did not cost to exceed \$5. In addition to this the trimming, linings, etc. did not cost to exceed \$3, making the total cost of material in the suit \$8. Therefore, some one got the difference between \$8 and \$36, or \$28, and this someone could not be reached by the tariff.

The Daily Consular and Trade Reports says that in Syria local tailors charge only \$3.25 to \$4.40 for making a suit of clothes where the cloth is furnished by the purchaser. In the United States most tailors charge \$25 for making a suit, providing you furnish the cloth. Many of them, however, charge \$30 and even \$40 for making a suit when the material is furnished by the purchaser. This low cost of labor in Syria explains the high cost of clothing in the United States.

NEW MEXICO WOOL GROWERS.

On October 11 the wool growers of New Mexico met at Albuquerque and reorganized their wool growers association by electing Mr. H. C. Abbott of Springer president, and passing strong resolutions urging the retention of the tariff upon wool, opposing the leasing of the public lands, and thanking the National Association for its efforts in securing a reduction of the rates upon wool. An effort will be made to rejuvenate the organization and give it a standing in the community that the sheep industry of New Mexico merits.

Commercial Phases of the Sheep Industry



NE week last September the lamb market dropped 50 cents to 75 cents per cwt. There was no warrant for such depreciation, save temporary and avoidable congestion. In shipping circles denunciation was audible and packers were its target. The Wood lambs from Idaho dropped from \$7.50 to \$6.85 per cwt. in a few days, indicating how demoralization may take possession of a market. With a short lamb crop this stereotyped slump during the latter part of September and through October ought to have been avoided if statistics are worth anything, and yet for lack of co-operation on the part of shippers serious depreciation became inevitable. This Fall glut does the packer no service. It merely works killing gangs overtime, forces an accumulation in coolers and results in heavy shrinkage while an accumulation is awaiting access to slaughter benches. The remedy is obvious.

At a period when hog and cattle prices were advancing such a price smashing carnival as occurred during September and October in the sheep house was absurd. Congestion, not oversupply, was the palpable cause and absolutely no reason for it existed. The whole matter resolves itself into a case of improper marketing methods and of course there's a remedy. It lies in co-operation among shippers.

To my mind there is no good reason for the grower whose lambs are dropped early holding them to come into competition with the crop from sections where lambing is late. It is a system that works to the distinct disadvantage of the grower and to the advantage of nobody interested. It is a system that results in abnormally high prices in August and demoralization later on. I can suggest an easy remedy in the creation of a bureau, presumably under control of the National Wool Growers Association, which could list prospective

By Frank J. Hagenbarth

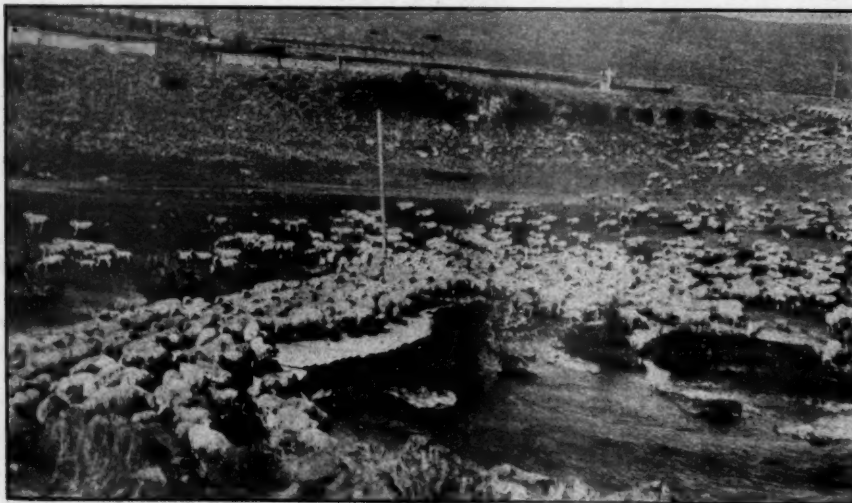
shipments and in a general way govern the movement in such manner as to make Fall congestion impossible. The bureau could get reports in July and send out statements for shippers' guidance. This would avoid a sparse supply of less than half a million at Western markets in a week during the fore part of September with over a million at the same points two weeks later.

There exists an erroneous impression that holding lambs late enables the grower to profit by added weight. As a matter of fact a lamb properly bred and fed makes no gain after attaining the age of four months. When weaning begins a shrinking process sets in and the proper age to

Omaha. The normal weekly killing capacity at these points is less than 700,000 head and the packer is not to be blamed for taking advantage of the fact that the shipper has his wares at the market and faces the necessity of taking whatever he can get. That is human nature, and it is a marvel to me that prices were not lower.

There has been much complaint among growers regarding market conditions this year, some of it unreasonable. Much of it has concerned low prices for wethers. Now the bulk of this stuff has been of Merino breeding and possessed little merit for mutton purposes. Such sheep are heavy pelted and of low dressing capacity. They are unprofitable to the packer and unpalatable to the consumer. Also entering into the sheep class has been a glut

of shelly old ewes that have exerted disastrous competition for wethers. It is true they are undesirable from a mutton standpoint, but their presence at the market always exerts a depressing influence. Packers have not been to blame; they were required to purchase an unmerchantable article and did so at a discount. The heavy run of wethers of the past Summer, however, was due largely to cleaning



COMING DOWN TO WATER AT SPENCER, IDAHO

market milkfat lambs is between three and one-half and four months. The present method not only demoralizes the market, but subjects growers to heavy shrinkage. Railroads are unable to cope with demand for cars while the rush is on. Another error is in shipping thin lambs the latter part of September and early October, aggravating congestion. Demand for feeders is usually most urgent during the latter part of October and November and that is the most opportune season to market late lambs. One crying need of the trade is for effective co-operation among shippers. During the first week of last October around one million sheep and lambs were received at the five principal Western markets, the bulk at Chicago and

up by Montana, liquidation that will soon place that State in third place as a producer of wool and mutton.

Growers of Merino sheep in the West must accept the fact that they are on a wool instead of mutton basis and charge part of their wool profits against depreciation in mutton. The mutton they market is merely a by-product of wool and must be appraised for what it is. Merino lambs cannot be sold for fat lambs and feeders have no use for them, consequently they are matured on dry ranges in Wyoming, Montana and elsewhere for wool. Eventually they must go to market, but the loss due to the discount which

(Continued on page 49).

The Effect of the Pasturage System Upon the Sheep Industry in the Far West

THERE are in the far West, from Colorado and New Mexico west to the Pacific Coast, inclusive, approximately thirty million

sheep. With few, almost negligible exceptions, they are all grazed for at least a portion of the year on lands embraced within National Forests, the Public Domain, or upon privately owned lands which are used almost exclusively for grazing purposes, only a small percent of which are at present under fence. The total area of these grazing lands has been materially

decreased, even in the past few years, by the transformation of what formerly was Spring, Fall or Winter range, into irrigated fields upon the completion of irrigation projects, and, on the whole, perhaps a still larger area has in the past ten years been transformed into grain fields by the application of dry farming methods. With the constant advancement in the science of dry farming, the increasing number of irrigation projects, and the great desire on the part of so

many people to own land, it appears to be not a supposition, but a fact, that the average of purely range lands will continue to decrease for an indefinite time in the future. The lands actually transformed into farms have been taken largely from the plains, valleys and foot hills, but the effect upon the range sheep business is even more far reaching. In order to have successful irrigation water storage projects the source of water supply must not be impaired. The watersheds are not

By James T. Jardine, Inspector of Grazing, U. S. Forest Service

infrequently important Summer range and in the light of data at present available they must be protected against abuses which accompany overstocking or poor management of stock. If the forage is to be fully utilized it must be done under the most careful management of the stock, especially in the case of sheep.

Another factor of increasing magnitude in its effect upon the sheep industry on

brought about in the existing systems of handling the stock—again, especially sheep, upon the watersheds involved in such controversy.

In addition to this there is the question of securing the natural regeneration of the forests.

These problems are cited because they have materially changed the aspect of the sheep industry on Western ranges in recent years and make it essential for all concerned not to argue but to reason and plan with a view to securing the fullest

possible utilization of the range resources consistent with the necessities of the other industries involved, and the welfare of the people who are dependent upon mountain streams for their drinking water. This brings us to the subject of this paper—"The Effect of the Pasturage System Upon the Sheep Industry in the Far West."

In considering a change from the established open range handling to a system of fenced pastures the sheepman is primarily interested in the

balance sheet showing the advantages weighed against the difficulties to be encountered in successfully inaugurating the pasturage system.

Advantages of the Pasturage System.

The advantages of the pasturage system over the present open range system of handling sheep may be enumerated as follows: (1) an increase in the number of sheep which could be carried on the range lands; (2) a higher percentage of natural increase of lambs each year; (3)



RANGING HIGH UP IN THE FOREST

Western ranges is the question of protecting the source of water supply used for culinary and drinking purposes in cities and towns situated within the range belt. Where the welfare of many human beings is pitted against the advantages of grazing even several hundred thousand sheep, there can be little question as to which will eventually win. The acreage of range which will be affected by this factor will undoubtedly depend to some extent upon what improvements can be

a decrease in the number of sheep lost each year; (4) an increase in the weight of sheep; (5) an increase in the weight and value of the wool clip; (6) a decrease in the cost of handling exclusive of initial cost for fence; (7) a decrease in the present difficulties of securing efficient labor; (8) a greater possibility of knowing in advance the number of sheep that can be run, what losses will be incurred, and what the condition of the sheep will be at market time.

Increase in the number of sheep which could be grazed on the range lands would be due to several factors. Most important of all would be the minimizing of waste due to trampling, caused very largely by close herding in the large bands, trailing and camping more than one or two nights in one place.

The next important factor aiding to increase range carrying capacity would be a more even utilization of every portion of a range. The carrying capacity of a range allotment must be gauged primarily by the condition of the most heavily grazed portions of that allotment. If local heavy grazing cannot be avoided. There are, under the present system of handling, many areas of good browse range in heavy timber which are not utilized at all or not fully utilized because the average herder is afraid of losing his sheep if they are spread out over large areas of densely timbered range. Where such range is in small areas adjacent to open parks or openly timbered ridges it is fairly well utilized, but where it occurs in large, more or less continuous bodies of dense timber it is not utilized. If it were under coyote-proof fence, so that the sheep could be left alone, they would penetrate the timber and utilize all palatable forage. Not only this, but they would do well on it. In addition to the lack of utilization of range in timber the portion of allotments farthest from established camps are at present not fully utilized, while portions near choice watering places and camping places are too heavily grazed.

Still another possibility of increasing carrying capacity of the range if it were under fence would be the increased facility for alternating in the time of grazing different portions of the range. In an article published in the August issue of *The National Wool Grower* experimental data were cited to show that it is impossible to keep a range in condition of maximum productivity if it is close grazed during the first half of the main growing season, year after year. Such practice

gradually weakens the plant constitution by preventing the development and storage of the necessary amount of reserve food, and the result is a gradual elimination of the best forage plants, and the incoming of those less valuable. This difficulty can be avoided by lighter stocking so as to eliminate close grazing or by a rotation in the time of grazing, so that every two or three years the forage plants on each portion of the range will be allowed to practically complete their growth to seed maturity before they are grazed. In the absence of fenced pastures it is hoped that this principle can gradually be incorporated in the present system of management, but it cannot be so well managed as under fence, because its adoption is dependent upon increased water facilities, careful classification of the range and, under the present system of management, upon the securing of intelligent, reliable herders who are interested in their work. If the individual sheep owner constructed a fence and had exclusive use of the enclosed area for a number of years the increase in the number of sheep he could handle and the increase in their weight and wool growth, due to improving water facilities and carefully planning the use of the range, would justify his making the improvements. Under the present system sheepmen hesitate to incur such expense, and for the government to undertake it, except slowly, would require a larger appropriation than can reasonably be expected.

The additional factors affecting the number of sheep which can be carried upon the available range lands are those mentioned in the introduction—watershed protection and forest protection. The experience in foreign countries and on the many watersheds in the United States should be strong enough evidence to convince the sheepmen that the interests conflicting with unrestricted sheep grazing upon watersheds which are the source of water for irrigation or for drinking purposes are so important that the outcome eventually will be total exclusion of sheep or careful regulation. The advantages of controlling the sheep by pastures are obvious. On watersheds protected for irrigation the essential points are to prevent packing of the soil and prevent breaking up of the herbaceous ground cover. This end can be accomplished and the range utilized much more closely under pasture than under the present system of herding in large bands. On watersheds where supply of drinking water is in question, the

same two points are involved, in order to avoid floods and erosion, and the additional point of keeping the sheep away from the running creeks comes in. This last end can be accomplished only by developing water in springs, reservoirs, wells or by piping it from main streams to a place where it can be safely used for sheep. With pastures and increased assurance of permanency in the use of range, there would be much greater possibility of securing such water development. A close study of the effect of grazing upon the natural regeneration of forests points to the fact that overstocking, close herding, and trailing of sheep, are unnecessarily detrimental to natural reproduction of the forest. On the other hand, the damage occurring under more moderate stocking and open careful handling as well as regulating the time of grazing under different forest conditions, is much less, and, in most cases, can probably be justified when the importance of the sheep industry and the value of grazing, as a protection against fire, are considered. This careful management can undoubtedly be much more effectively accomplished under fence.

The total increase in carrying capacity of the Western ranges, which would accrue from the above advantages of the pasturage system I should put at 20 to 30 per cent above the number which can be handled, and secure the same conditions of range, under the present system of herding.

Larger Natural Increase of Sheep.

Under the present system of handling the percentage of lambs saved any one year varies from 60 to 125 per cent of the total breeding ewes in a band. This variation is due to several factors. One band has 15 per cent of dry ewes and another 5 or 6 per cent. In one band 10 per cent of the ewes will be too poor to furnish milk for their lambs, while the ewes of another band in the same locality will be comparatively free from such a condition. One sheepman's lambing range may have been eaten to the ground in late Fall the year before, with the result that in a poor year for early growth his sheep will be without feed during the lambing. His neighbor, who has better feed, saves many more lambs. One band may be provided with protection in case of inclement weather, either natural protection or sheds constructed. The adjoining band may be less fortunate and in case of cold storms during the lambing period suffer heavy loss. As long as sheepmen labor with uncertainty as to their Fall, Spring and Winter

range and are at the mercy of the weather to provide ample feed and thirty days of sunshine for the lambing period, there will be uncertainty as to the lamb crop. The variation between different bands the same year and the variation in the same band in different years will be comparatively great. If each sheepman controlled his range under fence he could more nearly control the conditions effecting his lamb crop by providing the necessary protection against losses in case of bad weather during lambing and he could have reserve feed either as range or hay in case of a cold Spring season, resulting in no green grass. Sheepmen who operated in years when a large band could be handled on free range by one man, receiving a wage of \$30 a month, would not perhaps take kindly to so much improvement, but conditions in many localities are tending toward a cost of operating that is out of keeping with uncertainty as to whether the loss is going to be 3 per cent or 30 per cent.

Decrease in Loss: In connection with the experiment of handling sheep in a coyote-proof pasture carried on by the Forest Service during 1908 to 1911, inclusive, the losses from the band in the pasture during the Summer season—June 20th to September 25th, were as follows:

1908—Twelve head out of 2209, 1-2 of 1 per cent.

1909—Four head out of 2040, 1-5 of 1 per cent.

1910—Twelve head out of 1762, 2-3 of 1 per cent.

1911 the loss was almost 1-2 of 1 per cent.

The average losses from herded bands on adjoining range this period were:

1908—3 per cent.

1909—A little over 2 per cent.

1910—Approximately 3 per cent.

1911—Nearly 2 per cent.

This shows the average loss under pasture as approximately 1-5 the loss from the bands herded on the adjoining range not under pasture. In this connection, it should be kept in mind that of the 2560 acres in the pasture 1700 acres was timber range, and that bear and coyotes were comparatively abundant.

Losses of sheep under range management are due usually to bad weather and lack of feed, actual loss by "cuts" from the band, loss from disease, loss from poisonous plants and loss from injury. If each sheepman controlled his range under fence the losses due to bad weather and

poor feed could be guarded against to some extent. at least, actually losing sheep could be largely eliminated; loss from disease could be minimized by greatly decreasing the possibility of infection from contact with diseased sheep or range used by diseased sheep; loss from poisonous plants would be much less because there would be less likelihood of hungry sheep striking en masse an area infested with poisonous plants and sustaining the heavy loss which frequently occurs under herding, and because sheep under fence could be more easily excluded from dangerous range; loss from injury would be minimized if the sheep were not disturbed. It is believed that the figures given above for the comparative study made by the Forest Service would hold in actual practice—a loss one-fifth as great under pasture as under the present herding system.

Increase in Weight of Sheep: The increase in the weight of sheep under pasture would be brought about in two ways. The comparative study to determine the growth of lambs under pasture and of similar lambs handled under herding on range adjacent to the pasture showed results as follows:

In 1908 grade Rambouillet lambs under pasture gained twenty pounds in eighty-eight days, between the ages of eighty-five days and 173 days. During the same season lambs of corresponding breeding under herding gained fifteen pounds in ninety-six days, between the ages of seventy-five days and 171 days. These lambs were from the best band out of six grazed near the pasture. In 1909 the pastured Shropshire-Rambouillet lambs, mothered by grade Rambouillet ewes, gained twenty-four and four-tenths pounds in ninety-nine days, between the ages of seventy-one days and 170 days. They were nine pounds heavier than the best lambs of any class handled under herding on range near the pasture. In 1910 grade Rambouillet lambs weighing thirty-six and one-tenths pounds when they were put into the pasture June 27th, at the age of sixty days, gained twenty-two and seven-tenths pounds in seventy-nine days. In 1911 medium grade Rambouillet lambs gained twenty-three and seven-tenths pounds in eighty-five days, between the ages of sixty-eight days and 153 days. The lambs from a band fully as good on outside range nearly gained fifteen pounds and the Rambouillet lambs from an excellent band of grade Rambouillet ewes, lambed three weeks earlier than the pastured ewes,

made a gain of twenty-two and seven-tenths pounds in eighty-five days, between the ages of approximately eighty-eight days and 173 days. This last gain made by lambs under herding was the closest approach to the gain in the pasture during the four years of test. The herded lambs were under the care of an excellent herder, who kept them constantly on the range and seldom molested them. It was the rare case of good sheep, an excellent herder and plenty of range. Emphasis is placed on this case because it substantiates the statement that the freedom and quiet handling in pasture will result in an increased growth of at least five pounds over the average growth made by the same class of sheep on similar range under herding. The pasture range used in the experiment was purposely grazed as heavy or heavier than outside range, to eliminate factors other than methods of handling.

Aside from the gain in weight due to a difference in method of handling the same class of sheep, the pasturage system would offer a greater possibility for the sheepmen to improve the quality of his breeding stock and raise lambs which naturally would be larger. The pasture would eliminate much of the worry due to possible loss, unreliable herders, "mixing," and hunting range, and would give the owner a chance to turn his attention to breeding up his flock.

Increase in Weight and Value of Wool Clip: It is generally conceded that the growth of wool and its quality are very closely identified with a healthy, uniform condition of the sheep. No year long test in pasture has been made and few actual comparative figures of wool clip under the two different systems are available. The few figures collected from sheep run on alfalfa pastures as compared with the same sheep herded on open range showed three pounds increase of wool under the pastures. Other miscellaneous figures collected indicate that the increased weight of fleece might be expected to vary from one to three pounds, due to the pasturage system. From a variation in the clip in different years under favorable and unfavorable weather and forage conditions, many sheepmen are better prepared than the writer to estimate what might be expected in the way of increased weight and increased value of wool due to a more uniform and cleaner growth. Under pasture the sheep are free and quiet, they should grow larger and, unless the pasture were badly overstocked, the condition of flesh

and health should be more uniform, with the result that the wool clip would be improved in weight and quality.

Decrease in the Cost of Handling: This item will depend to some extent upon the locality, as the present cost of handling varies throughout the West. After studying every action of sheep under pasture for four seasons the writer feels that one reliable man who understands handling sheep in pasture, and knows how to detect their needs, can care for four pastures, each large enough to accommodate a ewe band of 1000 to 1200 head, which would mean the care of 8,000 to 10,000 sheep, including lambs. It is felt that this could be done on timbered range. Where the country is untimbered even a greater number could be looked after by one man, if coyotes are excluded by fence. To handle the same number under the present herding methods would require at least four herders and two camp tenders. The qualifications of the man necessary to handle pastures must be higher than those of the average present-day herder and consequently nearly double the salary of the average herder would be necessary. All factors considered, the cost of handling under fence, if the fence excludes coyotes, would be about one-fifth to one-third as great as under the present system of herding.

Decrease in the Difficulty of Securing the Necessary Efficient Labor: The problem of securing the necessary efficient labor is one of the prime worries of the Western sheep man today. He frequently finds it necessary to place 2,000 head of sheep valued at from \$5,000 to \$8,000, on foot in a wilderness, under the care of a herder whom he picks up at a moment's notice from another herder who has decided to quit. This condition not infrequently results in "cuts" from the band, mixing with other bands, trespass, or poor sheep at the close of the season with a cut back of 100 to 200 head in case of a sale. Under pasture this worry and uncertainty would be eliminated. Put up a good fence and salt the sheep—then if all the help leaves the loss will be but small. This would not be the case, though. The foreman or reliable camp tender of to-day does not change jobs often, and this nucleus would be sufficient to furnish the men to tend the pastures.

Greater Possibility of Knowing What the Magnitude and Profits of the Business Would Be: In most sections a few years ago a sheepman could run several bands of sheep and own but a small amount of

improved farm or ranch property. Today it is perhaps safe to say that the average sheepman has as much invested in lands and improvements as he has in sheep. He finds it necessary to make such more or less permanent investments in order to continue in the sheep business. With this condition increasing there is need for increased certainty as to just what range is going to be available for use in connection with the investment in farms, ranches and improvements. Undoubtedly if the pasturage system were adopted sheepmen would have this greater assurance of permanency in their business.

Difficulties Arising in the Adoption of the Pasturage System: The difficulties which will be encountered in adopting the pasturage system are of two classes: (1) those which may be overcome by changes in existing laws and regulations governing the use, for grazing purposes, of lands lying within National Forests and Public Domain, (2) those which nature has imposed in the way of low carrying capacity of vast areas of the grazing lands, poor water facilities, inaccessibility by wagon or railroad, and existence, in varying numbers, of predatory animals.

At present the bulk of the Western grazing lands belong to the unappropriated public domain or lie within National Forests. Fencing on the public domain is illegal, and while individuals can use the range without charge, exclusive use is granted only by controlling the water supply. The range within National Forests is used under regulation, and while every effort is being made to utilize it to the maximum extent consistent with its permanent welfare and the welfare of other important industries, it is not the policy to insure exclusive use of any area for a period of years. Nor can such exclusive use well be granted until the relation of grazing to the natural regeneration of the forest, the supply of water for irrigation and for culinary and drinking purposes, is more definitely known. As long as it may be necessary to shift stock of any class from large areas in order to protect forest or watershed, it would be unwise to allow or encourage individual owners to incur the expense of constructing pastures. By careful study, however, this relation of grazing to the welfare of the other industries involved should be worked out within the next few years—by the time the majority of the stock owners will be convinced that it is to the advantage of the stock industry to fence. If this relation can be decided satisfactorily, it ap-

pears to me that fencing is the logical outcome wherever the barriers imposed by nature are not too great.

On the public domain grazing lands, except in a few instances, the problem is different. The main point involved is to work out a plan of regulation which will not retard settlement under the various land laws, and at the same time will insure stock men of exclusive grazing use for a period sufficient to justify fencing. It would be folly to undertake a discussion of this subject here, further than to state that with the present crowded state of the stock industry it is waste to continue under a system which provides for the support of two or three animals where three or four might graze, if the lands were more carefully handled.

The barriers imposed by nature—low carrying capacity of grazing lands, lack of water, areas inaccessible except by pack horse, and predatory animals, are important items when fencing is considered, especially on much of the range within National Forests. The carrying capacity of range within National Forests varies from approximately one-sixth to one and one-half acres necessary to support a grown sheep for one month; much of it is inaccessible except by pack horse; in most cases sufficient water exists or could be developed. Where the area is reasonably accessible by railroad or wagon a satisfactory coyote-proof fence can be constructed for about \$500, or less, per mile. If the land will support at the rate of one sheep on each six acres for year long grazing the fence will pay for itself in six to eight years. If ten acres is required for the support of one sheep year long the pasture will pay for itself in ten to twelve years. With an expenditure of not to exceed \$5 per mile each year for maintenance of the fence, it should last for fifteen years or more, in the Western climate. Where areas are inaccessible except by pack horses it is doubtful if fencing would pay except where the range is exceptionally good.

On public domain most of the grazing lands are reasonably accessible. A satisfactory coyote-proof fence should be constructed for \$400 to \$500 per mile, depending upon local conditions. The average carrying capacity of the lands will fall under the rate of ten acres per grown sheep per year. The main problem here would be providing sufficient water, and with few exceptions it is believed this dif-

(Continued on page 33).

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OUR ANNUAL CONVENTION.

We again call attention to the fact that our Forty-ninth Annual Convention meets in Cheyenne, Wyoming, January 9, 10 and 11, 1913. It is the duty of every sheep breeder to be present at this convention if at all possible. The Nation has elected a Congress and a President supposed to be unfriendly to the great sheep interests of this nation, and this new administration will watch with considerable interest the success of our next National Convention. Upon the wisdom of its deliberations may rest the future prosperity of a great industry. The wool grower who has not interest enough in the sheep business to assist in making this the greatest National Convention of Wool Growers that was ever held, will have but little to complain of if Congress should give him but modest attention.

DOG LAWS NEEDED.

One of the things that has discouraged sheep husbandry in the farm States is the loss occasioned by predatory dogs. In many cases this loss has been very serious, so much so, that the fear of such loss in all cases tends to restrict the raising of sheep. Many of the Eastern States have no adequate dog laws, a condition that indicates negligence on the part of the law makers, as well as carelessness on the part of the sheep breeders.

The coming Winter will find the Legislatures in session in most of the States, and will afford an excellent opportunity to secure the passage of needed legislation. The present high price of beef and pork is making it more apparent each day that the American people must more and more depend upon mutton for their meat food. Therefore it may be taken for granted that

the various Legislatures will look with favor upon any legislation tending to conserve our supply of sheep.

This association has called the attention of all the sheep record associations and other sheep breeders organizations to the necessity of this legislation, and we would suggest that those interested should meet in Chicago during the International and draft an adequate and uniform dog law for presentation to the various State Legislatures.

FAMINE.

The diminishing receipts of live stock at all the large central markets is receiving the serious attention of all economists. The situation is really alarming when one appreciates that we are distinctly an agricultural people, living from the fertility of our soil. The decadence of live stock production so far as it affects the price of meat is not as important as the destructive influence it must necessarily have upon the fertility of the soil, and its ability to produce cereals in an adequate supply for our people. Many expressions have been volunteered to account for the existing shortage of cattle. But the bare fact remains that the many years of lean prices gradually drove the cattleman out of business, until now we are reaping a famine. The most common cause assigned for this shortage is the settlement of Western ranges. However, we must not lose sight of the fact that much of the range that has now been plowed up would still have remained productive pastures had the price of cattle averaged sufficiently high to justify a continuance in the business. Many of our large cattle breeders turned to the plow only when live stock production failed to return sufficient revenue.

Remedies suggested for this live stock shortage have been varied, and to some extent ridiculous, ranging all the way from a suggestion that the tariff on meat be abolished, to the proposition that a law be passed prohibiting the slaughter of female cattle. Neither of these suggestions is practicable, and they would not accomplish the desired end. They would merely aggravate an already bad situation.

Relief from live stock shortage is to be found only in maintaining a fair and remunerative price for live stock at the central markets. Assistance can be had by classifying the remaining public domain so that the land chiefly valuable for grazing will not be opened to destruction by the homesteader; in freeing from taxes ewes and cows; in handling the national forests as a distinctly grazing proposition; and in reducing the railroad freight rates on live stock.

If the consumer wants immediate relief from high meat prices he can get a reduction of about 40 per cent by establishing co-operative retail meat shops. If the consumer cannot handle this himself, then the various cities should do it for him.

CAMPAIGN CONTRIBUTIONS.

When the Senate Investigating Committee was ferreting out those who made contributions to the presidential campaign of 1908, a certain carded woolen manufacturer made charges to that committee that wool growers had contributed to that campaign fund. Senator Clapp, Chairman of the Committee, called upon the carded woolen manufacturers for proof of their charges. But as they did not have one iota of evidence to support them the investigating committee did not feel justified in calling any of the officers of the various wool growers associations before them. While the committee could have taken no other course under the circumstances, we regret that we did not have an opportunity to speak for the wool growers and remove the stigma that had been placed upon them by these disgruntled manufacturers.

In order that these carded woolen manufacturers may sleep more peacefully, we want to state here that the National Wool Growers Association did not contribute one cent to the campaign of any political party in the last sixteen years, and, for that matter, probably never in its history since 1864. In the year 1908, when the

carded woolen manufacturers charged the wool growers with contributing so much, the records show that for all purposes during the entire year the National Wool Growers Association expended \$10,417. Of this, \$5,192.01 was expended in investigation of public land questions. The other \$5,224.99 went to pay the usual yearly expenses of the association, including the salary of the Secretary.

The carded woolen manufacturers must not forget that the wool growers are not overly opulent, and do not seem destined to become so. One of the reasons for their continued poverty is found in the fact that while they produced 150,000,000 pounds of wool suitable for carding in 1909, the carded woolen manufacturers used but 73,514,264 pounds of that wool, leaving the balance to be consumed on machinery for which it was not adapted. Another factor that keeps them out of the campaign-contribution class is the extensive use of shoddy and cotton in woolen goods by a certain class of manufacturers.

WOOL SALES.

The wool growers of Oregon, backed by the bankers of Portland, have a plan under consideration for financing the sheep industry of Oregon, as well as establishing a large central wool warehouse at Portland to handle the State's clip. The Oregon wool grower is awake to the fact that the opening of the Panama Canal means a decidedly lower freight rate to the Eastern market. To take advantage of this rate, however, nearly all of the wool will have to pass through the city of Portland, and this will afford an opportunity to concentrate the clip in a central warehouse where the growers may act as a unit in disposing of it to their own advantage.

The banks of Portland are working out a plan by which they will be able to furnish the Oregon wool grower with needed capital at rates similar to those obtained in the East. This will enable the wool grower to handle his clip independent of outside influences.

The Panama Canal is destined to work a change in the existing wool markets of the country. We predict that shortly after it is opened a wool warehouse will be established at San Francisco which will handle the clip of the southwestern States. Undoubtedly, wool auctions will be established and the wool grower will be awakened from the Rip Van Winkle methods that have attended the sale of his wool for the past quarter of a century.

NOT THE PACKERS' FAULT.

During the heavy run of sheep in the early days of October the price of lambs dropped from 50 cents to 60 cents per hundred. We are surprised that it did not drop more. The flockmasters had deluged the market and they, not the packers, were to blame for the slump in values. By the way sheep were being rushed to the Eastern markets one who did not understand the sheepmen, would have thought that they were worth a dollar a pound, or that some law existed compelling them to be off the ranges in the early days of October.

Just so long as the sheepman markets his product in this careless, unorganized manner, he will continue to receive low prices for it, and when such prices come he can place the blame very close to home. This was the one year of all years when there was no excuse for crowding the market. The early October lambs could have been marketed sooner or held until later. Grass was abundant and stock cars numerous. We believe that much of the slump in values came about through the shipments of three large operators, and it is probable that three postage stamps are all that would have been required to have prevented this over-supply.

PAPER TWINE.

Through the pages of this paper we have repeatedly urged the wool growers to tie their wool either with paper twine or hard glazed twine, both of which have been highly endorsed by wool dealers and wool manufacturers. Probably we have referred to the necessity of using better twine so frequently that growers have tired of hearing further, but even if such be the case we offer no excuse for again dealing with this subject. Its importance merits it.

It has been said that our wool growers use less care in tying their wool than any wool growers in the world. If this is true, we should be ashamed of it.

We have the testimony of wool manufacturers that wool should be tied with paper twine or hard glazed twine, and that the use of soft twine is injurious to the wool. We know this to be true. It is therefore our duty as progressive wool growers to tie our wool with such twine as meets the approval of the men who pay for the wool.

In this paper will be found the adver-

tisement of a paper twine, as well as one of a hard glazed twine. We want to ask you to study these advertisements, decide which twine you desire to use, and then go to your storekeeper and have him order it for you. If you do not desire to buy through the storekeeper, write one of these firms direct, but the important thing is to order this twine. We would not in these pages refer to one of our advertisements were it not for the fact that in our judgment the benefits to be derived from the use of better twine will be decidedly greater to the wool grower than to the man who sells the twine.

MEETING OF IDAHO WOOL GROWERS.

The annual convention of the Idaho Wool Growers Association will be held in Boise, Idaho, on Monday, January 6, 1913. This will allow the delegates in attendance at that convention to leave on the 7th for the annual meeting of the National at Cheyenne on the 9th.

The fact that President-elect Wilson will call Congress in special session for April 15th should indicate to every sheep breeder that this is the time for alertness and action. All of these State meetings should be well attended in order that the country may understand that the wool grower is not going to allow his interests to be sacrificed without a fight.

A FRIEND DEFEATED

Either through the negligence or carelessness of the stockmen and farmers of the First District of Colorado Congressman Rucker was defeated for renomination in the recent primary election. We are at a loss to understand his defeat for Mr. Rucker had rendered to the agricultural and live stock interests of his state a service greater than that rendered by any democratic member in Congress, and it would seem that even a faint appreciation of his services would have been sufficient to cause these interests to see that nothing occurred to prevent Mr. Rucker's return to Congress. However, such is fate, and we predict that ere the next session of congress shall have been passed into history the men who were responsible for the defeat of Congressman Rucker through their failure to vote at the primaries will regret their inaction very greatly.

Cheyenne, January 9th, 10th and 11th.

Wool Growing in Australia

Part VIII--Freezing Sheep for Export

By R. H. Harrowell

AS THE growth of the frozen meat trade has had a great influence on sheep breeding in Australia, and as it is likely to have a greater influence in years to come, it is worthy of an article to itself. Before the discovery of refrigeration, sheep in Australia were only of value from a wool and tallow point of view. Now all that is changed and the carcass can be frozen and landed in London and other large centers of population in the pink of condition for human food, and it opened a wide future for sheep breeding in Australia.

About the year 1850 there were about 16,000,000 sheep and 2,000,000 cattle in Australia, and the total population in the Commonwealth was only about 400,000. There was of course no means of sending meat to the markets of the world and sheep were bred for wool only, and their carcasses were boiled down for what tallow could be extracted. At that time there were about 110 boiling-down establishments in Australia, and as many as 800,000 sheep, 70,000 cattle, were boiled down in a year. It was thus very hard to dispose of the surplus sheep, and cattle were worth only from \$10.00 to \$20.00 per head. Subsequently canning works were established, and a tinned meat trade was worked up between the Australian Colonies and England. The growth of this trade was remarkable, and in 1869 the United Kingdom imported no less than 2,000,000 pounds of tinned Australian meat.

But for some years previous investigations with cold processes of preserving meat were attracting the attention of Australia and South America and other parts of the world. Mr. Thomas Sutcliffe Mort in conjunction with a French engineer called Nicolle were the first men to solve the problem of refrigeration, and the first freezing works in the world were built in 1861 at Darling Harbour, Sydney. Thirteen years later Mr. Mort's company became the New South Wales Fresh Food & Ice Co.

In 1875 a slaughtering establishment for supplying carcasses to the Darling Harbour Freezing works was completed at Lithgow in the Blue Mountains, and at the inaugural luncheon on September 2nd of that year Mr. Mort entertained 300

guests, and the meat supplied was all frozen. It was on this occasion that Mr. Mort delivered an address which has since become famous, so redolent is it with prophetic instinct. It must be stated that Mr. Mort had spent a huge fortune on what he called "the diabolical idea of sending frozen meat to England." He had persevered in the face of many failures and heavy losses, and Australia and the world in general owes him a great debt for his faith in the future and his stoutness of heart.

Addressing his guests at that historic



AN AUSTRALIAN MERINO

luncheon thirty-seven years ago, Mr. Mort said:

"I feel, as I have ever felt, that there is no work on the world's carpet greater than this in which I have been engaged. Its objects and aim may be summed up in the few words, 'There must be no more waste.' This is the sentiment that has kept me nerved to the great battle I have been fighting, which has induced me single handed to risk a large portion of my children's heritage, and to follow up to the very end the great truth which my friend, Mr. Nicolle, showed me in the beginning was to be attained. I knew from the results of our first experiments that the truth was at the bottom of the well, but I had no idea that the well so deep. I am now satisfied that even if I should not be spared to see the first cargo landed in Europe, enough has now been done to en-

sure its being accomplished by someone, and that before very long, for the difficulties are not on board ship but on shore. It is no easy task to freeze 500 tons of meat containing as it does 375 tons of water but to maintain the cold in that quantity of meat in a well protected chamber is easy enough. Yes, gentlemen, I now feel that the time has arrived, or at all events is not far distant, when the various portions of the earth will each give their products for the use of each and all that the over abundance of one country will make up for the deficiency of the others. The superabundance of the year of plenty serving for the scant harvest of its successor; for cold arrests all change. Science has drawn aside the veil and the plan stands revealed. Faraday's magic wand gave the key note and invention has done the rest. Climate, seasons, plenty, scarcely, distance, will all shake hands, and out of all the commingling will come enough for all."

In 1876, in addition to Mr. Mort's own capital, Australian squatters contributed about £20,000 to fit up the sailing ship Northam to carry a trial cargo of frozen meat to England. This experiment however broke down before the vessel left the harbor and its failure was a great blow to that sturdy pioneer, Mr. Mort.

In 1877 a shipment of meat went from Buenos Aires to Rouen, but as far as Australia is concerned the first shipment did not leave till 1879. This was the Strathleven which left Melbourne on December 6, 1879, with forty tons of mutton and beef on board. The cargo was landed in London in February, 1880, and it realized from 4½d to 5½d per pound for the beef, and 5½d to 6d per pound for mutton.

This meat had cost but 1½d. or 2d per pound in Australia, and the success of the shipment opened up a wide future for sheep breeding in this country. From that time on, bit by bit, the frozen meat trade was built up, until at the present day it is of immense importance to Australia. To New Zealand it has been of even greater importance and the history of the trade there is too detailed to be referred to here. The two countries differ in one very great respect as regards the frozen meat export trade, viz., New Zealand breeds sheep, and farms specially for the trade, while Australia has, until recent years, only considered it as a means of disposing of her surplus Merino stock.

But change is ever on the move, and in the Commonwealth much more interest and study is being devoted to the pro-

duction of sheep specially suited for the export trade, and in farming so that the natural grasses can be supplemented, thus ensuring more regularly of supply.

In regard to sheep matters, Australia has for so long been a land of vast spaces and there has been so much room that there has not been the necessity for men on the land to study the science which makes every acre produce the utmost. Sheep farming has really been sheep grazing, and the whole business has been built up on natural grasses. The result is that Merino sheep predominate in a marked degree, and as they are at the mercy of the seasons, the number available and suitable for export is always fluctuating. But railway construction in this country depends upon votes, the railways being state owned, so that the money available is all spent where there is most population. No railways are being built into the back blocks, so that land is now very valuable near existing lines. This is causing big estates to be broken up, and Merino flocks which have taken perhaps two generations to establish have been dispersed forever. The land has increased from \$5.00 per acre to \$40.00 or \$50.00, and it is thus too expensive to be used for the production of Merino wool. Wheat growing has taken its place, and in conjunction with this industry the science of growing good mutton sheep for export is receiving wide attention. This will of course result in crossbred wool being grown on the land that once produced the pure Merino staple, and in this industry the leading British breeds of sheep will play an ever increasing part.

The part Australia plays in the production of sheep for export can be gauged from the following figures. Those relating to beef have really no bearing upon this series of articles, but I have left them as an extra point of interest.

Season taken as from 1st July to 30th June in each year.			
Seasons	Mutton Carcases	Lamb Carcases	Beef Quart'rs
1904-5	381,345	672,101	4,127
1905-6	566,143	1,232,799	25,409
1906-7	850,094	1,249,399	30,940
1907-8	601,208	1,399,997	66,364
1908-9	1,166,445	1,318,747	155,664
1909-10	2,343,639	1,278,176	391,860
1910-11	2,111,756	1,661,897	587,351
1911-12	1,909,088	1,450,651	450,559

There are now in Australia thirty-nine refrigerating works operating in the frozen meat trade. Twelve are in New South Wales, eleven in Queensland, thirteen in Victoria, two in South Australia, and one in Western Australia.

What I have written will enable your

readers to form an idea of the extent of the sheep freezing industry in the Commonwealth, and it has its bearing on this country from a wool point of view, because every year marks an advance in the crossbreeding industry, which in its turn means an increase in the quantity of crossbred wool produced.

My next article will deal with the subject of producing sheep for export purposes, and the possible extension of the Merino and crossbred industries in Australia.

A SUCCESSFUL MONTANA FARMER.

The Hesper Farm one of the best known ranches of Montana and probably the most famous in the entire Northwest, this season made good its reputation as the exemplar of what scientific farming means when practiced in Yellowstone County. Montana, as well as demonstrating that scientific methods will pay big returns when practiced in any other locality of Uncle Sam's domain. The owner of this farm which consists of 640 acres with a highway on all four sides of it, is regarded as one of the most successful farmers of modern times. He keeps an accurate book account of all receipts and disbursements in connection with the operation of the farm and for the benefit of farmers everywhere he makes public his annual financial statement showing profits and losses if any, on every sort of work undertaken during the year. These statements are looked forward to with great interest throughout the state. Here are some of the yields reported by Mr. O'Donnell for this year:

From 60 acres of Swedish Select oats he threshed 7,555 bushels which was an average yield of 126 bushels per acre.

From 10 acres of Spring Club wheat he harvested 744 bushels or an average of 74.4 bushels per acre.

His yield of sugar beets will run 18 tons to the acre this season and his alfalfa has for years averaged better than 5 tons per acre. He is popularly known as the Alfalfa King, not entirely because of his success as an alfalfa raiser but because of his policy of feeding on the farm every ton which he raises. Mr. O'Donnell maintains that while other farmers are selling their alfalfa for \$5 and \$6 per ton he is realizing from \$10 to \$11 per ton for his alfalfa fed hogs, sheep and cattle besides enriching the soil with the tons of manure which results from stock feeding.

WHAT REDUCTION IN TARIFF MEANS.

Dalgety's Review, in its summary of the wool situation in Australia, prints the following:

Lower wool duties in U. S. A. would be of enormous value to Australasia, the United States as previously shown being the largest wool-consuming nation in the world, and instead of American buyers being forced to continue their attention to super wools of light shrinkage, as has been the case under existing duties, the scope of the demand would be widened and a very much larger portion of our staple product would be taken.

Whatever duty is placed upon foreign wool imported into the U. S. A., it seems safe to say that there can be no increase in wool production in the United States, for the annual slaughterings now amount to from 14,000,000 to 15,000,000 head, which is equal to the lamb crop of the year. Under the existing tariff the margin of profit to woolgrowers in U. S. A. is small; a lowering of the duties will undoubtedly result in many going out of the business and in a heavy decline in sheep numbers and wool production.

The Gorman-Wilson Law of 1894-1897 made raw wool free of duty, and during that short period sheep numbers decreased by over 10,000,000 in the States, and the local production of wool by over 88,000,000 lb. Free wool, or a greatly reduced tariff would not only result in a greatly expanding demand for Australasian wool, but would, before long, open up an important market for our meat. The importance of the forthcoming Presidential election in U. S. A. therefore can hardly be overestimated; hence this rather long digression.

The only other civilised nation to levy import duties upon raw wool is Russia, and as the duty is at so much per lb., irrespective of conditions, that country naturally buys scoured wool only.

JAPAN'S PROGRESS.

During the year 1911 the value of wool imported into Japan was \$3,854,100. Relatively, this is a large consumption of wool, and we recall that ten years ago Japan's wool imports were insignificant.

The great volume of the Japanese clothing wool comes from Australia. The Japs have learned to blend the Australian wool with the low grade wools of China and India in the manufacture of clothing, just as our own carded manufacturers blend our wool with the wools imported as carpet wools.

A feature of the Japanese wool business is that they have paid the highest price for Australian wool during the seasons of 1910 and 1911. The high price for 1910 greasy wool was 32½ cents, and 32 cents for 1911, both of which prices were paid by Japanese importers.



HAULING WOOL AT DOUGLAS, WYOMING

The Future of the Range Sheep Business

By Roscoe Wood

WHAT the future holds in store is something no man knows: he can only guess. He may reason and judge from past experience, basing his guess on the saying that history repeats itself. He may note the tendencies of the times in any line of business and its connection and dependence upon other lines, and still the future remains a guess. Unforeseen contingencies and unexpected conditions may arise which upset all reasoning. Consequently, any prognostication is debatable, and can only represent individual ideas. It is therefore with some hesitation that we present a few ideas as to prospective developments in the range sheep business.

The raising of sheep and the growing of wool under range conditions is a business of no mean proportions and of no small importance in the general industrial activity of this country. A business which annually produces ten to fifteen million sheep, or lambs, and 175 to 200 million pounds of wool, comprising sixty per cent of the total production of those essential commodities of food and clothing in this great country is not to be lightly considered. Basing future development upon past and present tendencies and noting their course we may be able to determine some things which will become factors in this business in the near future.

The inception of the range business was down in the southwest where the Merican descendants of the Spanish Explorers of this continent adopted the broad stretches of unoccupied land to the only industry of which they had knowledge, the raising of sheep in large bands. For this was a profitable business in Spain. When the Indians and the buffalo were driven from all this vast western country ex-

tending to the Canadian line, grass was the only product, and cattle and sheep were the best known and quickest means of turning it to the profit of the white man. The land was open, it belonged to Uncle Sam, and until the pioneer came to gamble with the proprietor that he could stay on it five years, the grass was free to any stockman who would come to get it.

Sheep generally followed cattle. Both, however, had little thought of settling, of taking up land, of establishing a permanent business. They had no thought of the morrow. Their only idea was to get all the grass they could today; tomorrow they would move on to other and better feed, which Nature in her abundance would provide for this wandering gambler. This nomad shepherd was also trusting not only to Nature for feed but he was taking chances that no drouth nor blizzard would come to starve or freeze his sheep to death. To be sure in the early days there was much land and grass and few men running sheep, but as those men were seen to make good profits on small investments they soon had many competitors wanting some of that free grass. The result of this was a rapid increase in the number of sheep while the grass was setting scarcer; for the settler was also beginning to appear, and when he stopped he took to himself a good piece of land, one that controlled no little grass, for range for sheep depends on water, and the settler also needed water. So he made his filing on some good creek or spring, and the sheepman's range was curtailed. In those sections where water was plenty this was not so important, but where water was scarce it meant much.

Crowded on one side by his competitor and on the other by the settler, with rapidly decreasing chances for moving to unoccupied lands and their wealth of grass, the sheepman turned to the only alternative of self-protection, the taking up of land for himself. Thus was one great change made. The sheepman was establishing his business permanently; at least, he was forced to stay in one locality instead of roving from place to place with no thought of his business nor of the future. This location has been brought about in different ways in different sections. In those places where railroad grants had been made the land was bought by individuals and corporations or leased in large bodies by sheep associations, the members of which prorated the amount of land and cost according to the number of sheep run. In those localities adjoining forest reserves which were being established about this time the amount of range was determined by the number of sheep any man could run on the reserve in the summer, and as there was generally plenty of open land for other seasons for what sheep could go on the reserve there was no occasion to take up any land. In still other sections where were neither railroad lands nor forest reserves the sheepman secured title to such land as had water upon it, or leased it, and so controlled enough grass on which to feed his bands.

This has been one phase of the development of the business, the constant acquirement of more land, either by title or lease, until it seems to us that the ultimate result will be that every man who runs sheep will be required to own or control every foot of land on which he runs sheep. How this will work out we are not prepared to say. The Federal government has

too long held an antagonistic attitude toward the stockman, especially the sheepman, in its land policy. On the other hand many sheepmen have opposed any change in this land question, fighting a leasing proposition of any kind, and thinking that conditions would remain as they were, enabling them to secure grass without cost and making no provision for the future. The Government has been playing too much politics in trying to protect the rights of the settlers, as it professes to claim. Much of this land on which sheep have or do now run is fit only for grazing purposes; Nature never intended it for anything else. And when the Government or enthusiastic land boomers seek settlers for such land in the expectation of making it profitable agriculturally they are working injury not only to the sheepmen who can make profitable use of that land but also to the settler thus induced and to the country as a whole. Given a long-time lease or the privilege of purchase at a reasonable price and the sheepman can establish his business on a safe basis, he can determine how many sheep he can handle, and he can so handle his range that he can secure the most from it for a series of years. With this secure tenure of the land he can make improvements and reduce many now unavoidable expenses.

Another tendency that is very noticeable and which promises to increase and become more general is the provision for feeding in the winter. In some places where it is not possible to get hay nor feed it, due to lack of water, corn is the main reliance in time of storm and snow. This will keep life in the sheep and carry them along for a time, but forage of some kind is necessary; then too, in most range sections corn is too expensive. Hay feeding for two to four months during the winter is going to be the general practice in those range sections where irrigated districts are being developed and alfalfa is raised in any quantity. With hay at three to five dollars a ton a sheepman can profit by feeding his sheep instead of running on the range. He can gain enough in the weight and quality of his wool clip, the stronger, better condition of his sheep, and the elimination of the chance of loss to far more than pay the expense of the hay. While for the man who grows the hay there is no market so good for him, as it leaves a good portion of his crop in the form of fertilizer to put back on his land and make it more productive.

With this hay feeding comes in many cases the building of sheds and the practice of earlier lambing than would be otherwise practical. Those who can do this are able to get early lambs and put them on the market ahead of the crowd and secure good prices. They also eliminate much loss incident to lambing on the open range. As more men do this there may be less difference in the prices of the early lambs and the later ones, but it will tend to equalize the supply of lambs over a longer period, eliminating the big runs on the market as well as the times of scarcity, and so holding prices on a steadier basis.

With the development of the range industry into an established business must also come improvement in the quality of the sheep. In times gone by, and even yet in too many places, the idea prevails of having sheep, but it matters not what they are just so they are sheep; no care is given to the breeding, to the improvement of the flock. Too many range men have sought only numbers; instead of these they must in the future see how good they can raise them. It costs no more to feed and care for a good sheep than a poor one, for a ewe that shears ten pounds than one that shears five, for a lamb that weighs sixty-five pounds than one that weighs fifty. Much of this can only be secured by more attention to the breeding. Culling of the ewes and judicious selection of rams is essential. Judgment must be exercised as to the breed and type of the rams, governed by the conditions of climate, range, and market under which the sheep are being handled. There must also be continuity of purpose in breeding, if profitable results are secured.

This has been one of the great faults of many range men, due in no small measure to the conditions to which his business has been subject. With his business permanently established and its size definitely determined, it is necessary to decide for himself the purpose of his breeding and follow it. Heretofore and even now many men have no clear, well-defined idea as to their breeding. They want to make money, but they do not know whether to raise lambs, or wool, or carry the lambs to mature sheep; whether to raise a Merino or a Blackface; and most of them compromise the whole business by using a nondescript ram of most any breed or a mixture of several breeds that does not happen to cost much money and then using something different every time they change bucks.

The range sheepman will have to determine for himself what purpose of a sheep is best adapted to his individual conditions, and with it the breed that best serves that purpose, and then he must breed accordingly. If his range and other conditions will produce a lamb fat for the block at three to four months old, and a Hampshire or a Cotswold or some other breed produces the best lamb for his purpose then he will breed such rams and learn that the best ones he can buy will be the cheapest and most profitable. If his conditions require him to maintain and improve his flock from the ewe lambs, then he must determine the class of ewes he wants and buy such rams as will produce them. Regardless of the purpose, improvement and maximum profits can only be attained by using purebred rams of that breed which has been chosen as best fitted to his conditions.

Indiscriminate crossing and mixing of breeds can only result in a scrub; it does not produce improvement. With conditions of permanency carrying a definite amount of expense for maintenance increased profits can only be secured by improving the sheep that are produced. This can only be done by buying better rams and giving the sheep better care and feed. The old fickle idea which went beside the wandering sheepman of yesterday that if lambs are high this year we will breed a Blackface; if wool is a good price next year, we will breed a Merino, and so on, must go into the discard. A permanent business requires established lines of procedure to be deviated from only by the arising of unexpected contingencies. It is the man who maps out his course and follows it that wins success. The range sheepman who will win will be the one who selects his breed and improves his flock with that one breed.

More economy in the real meaning of that word in running sheep on the range will have to be practiced. With the permanent establishment of the business must come the putting in of such equipment as will reduce labor costs during a term of years, but has heretofore been impractical. Shearing pens, dipping vats, sheds, small pastures, and other improvements which men have been able to get along without will soon become essential and economical. With this will come the elimination of infectious diseases like scab. Men see they cannot afford such extravagances and they will adopt such methods as will prevent them. Likewise will effective

measures be adopted of killing such predatory wild animals as now prey upon the range sheep and cut down the sheepman's profits by the avenue of actual loss.

Another important development which is coming fast is the elimination of gamblers and speculators and the requirement of a knowledge of the business. The reverses and hard times in the sheep business during the last two or three years have not been without their benefits. They have compelled those men whose real business was something else and all those who thought the sheepman was making some easy money and they would get some of it, to either learn something about sheep or quit, with generally the latter result. Running sheep on the range is a business by itself and requires as much knowledge, ability, and attention as any other business, and in the future the man who succeeds west will be he who gives it his best intelligent efforts. He must know sheep and how to breed and feed them best to get the most from them. It has ceased to be a speculative gamble and has become a legitimate business requiring special knowledge and business methods.

This leads to another factor, that of credit. In the past banks and bankers have sometimes been too careless in loaning money on sheep. They have trusted too much to chance, have given credit to men who were not entitled to it with the result that when a tight time came, as such times do come, the man who was legitimately entitled to credit was deprived of it and compelled to sacrifice some of his holdings in order to carry the plunger who was in so deep that the bank was forced to carry him in order to try to protect itself against loss. In the future the good banker will not take such chances, and the man with a good safe legitimate range sheep business will be able to secure such credit as he needs and deserves at fair interest rates.

In addition to the individual conditions which vary in different sections of the country are the larger questions which affect the general welfare of the industry as a whole, and indirectly every man connected therewith. Problems of tariff, of railroad rates and service, of land policies, of the general betterment of conditions, of preparing and marketing the wool clip and the lamb crop, these and many others can only be properly solved with justice to the sheepman and his business through the aid of strong, effective organizations of sheepmen. Local, state, and national organizations; live, virile forces

which can and will do things are necessary in these times of organization and combination. These are only possible through the active, not passive, support of each individual sheepman. This requires money and effort, but no expenditure of either or both will bring greater proportionate returns to each individual sheep grower. The results that the National Wool Growers Association has already accomplished are evidence enough to any reasonable man that such is a fact.

These are some of the factors to be noted in the development of the range sheep business now and in the immediate future. The man who is taking heed of them and making his plans accordingly is the man who is to make the greatest success; and the more men who do this, and do it now, the quicker will they put their business on a business basis and secure to themselves the proper recognition of the importance of the range sheep business in the general industrial welfare and progress of this great country.

EFFECT OF PASTURAGE SYSTEM UPON SHEEP INDUSTRY OF FAR WEST

(Continued from page 26).

Difficulty could be overcome by developing springs, seeps, wells, or storage tanks constructed of earth, rock or cement, or by utilizing snow as is done on desert winter ranges at present.

There is one other difficulty which individual stockmen will see in adopting the pasturage system. Each individual will wish to know the acreage and location of the area he will have exclusive use of. The answer to this depends upon the law and regulations governing the allotment or lease of the lands. It must fall to the lot of some one to use the poorest range. This question, however, is the effect upon the individual, and not upon the industry as a whole, and the industry as a whole is the question under discussion.

By way of conclusion, it might be stated that when the gradual decrease in the acreage of range lands, the constant increase in the value of farm lands, the increasing perplexing problems of forest protection and watershed protection, as well as the increased cost of operating under the present system, are fully considered, it appears that the logical end eventually will be the range under fence.

THE WOOL GROWER'S STATEMENT. Made Under New Postal Law.

Statement of the ownership, management, etc., of The National Wool Grower, published monthly at Gooding, Idaho, required by the Act of August 20th, 1912.

Editor, S. W. McClure, Gooding, Idaho.
Managing Editor, S. W. McClure, Gooding, Idaho.

Business Manager, S. W. McClure, Gooding, Idaho.

Publisher, National Wool Growers Association, Gooding, Idaho.

Owner: (If a corporation, give names and addresses of stockholders holding 1 per cent or more of total amount of stock.)
National Wool Growers Association.

Known bondholders, mortgages, and other security holders, holding 1 per cent or more of total amount of bonds, mortgages, or other securities.
None.

(Signed) S. W. McCLURE,
Sworn to and subscribed before me this 16th day of November, 1912.

(SEAL) A. J. SCHUBERT,
Notary Public.
(My commission expires October 27, 1915).

On page 18 will be found a comparison of the old and new wool rates. After reading this table, if you have not paid your dues, we think you ought to.

AUSTRALIAN WOOL SALES.

Messrs. Dalgety & Co., Ltd., inform us that they received the following cable from their Melbourne Branch on October 14th: "Wool sales opened, attendance of buyers much larger than last season, competition very animated, fair selection. As compared with last season's opening rates prices are 15 per cent. higher, on an average. Shafly and coarse crossbred wool prices are more than 15 per cent. higher, short tender earthy wools 10 per cent. higher. The new clip promises to be on the whole lighter, very much finer quality, not so well grown, and more tender. The clip will probably show a decrease of 300,000 bales." The New Zealand Loan and Merchantile Agency Co., confirm the above opening results.—Wool Record.

Do not fail to attend the Cheyenne Convention. We have secured a grand array of speakers, and the city of Cheyenne is going to take care of us when these men are not entertaining us.

Be sure and read carefully the new wool rates on page 18 of this paper. This Association won \$500,000 for the wool growers when it won this suit.

English Wool Letter

Prices Distinctly Higher at London Sales.

To The NATIONAL WOOL GROWER:

THE event of the past month has been the holding of the fourth series of Colonial sales, and Coleman Street Wool Exchange has been seen at its best. It is as well that this big event takes place periodically, for however much some may attempt to "bluff" the honest inquirer as to what is the actual state of the wool industry, in Coleman Street the actual standing of the raw material is sized up at once, and to-day the handsome price that wool is commanding shows distinctly where it actually stands. One has to go back to the piping times of 1907 to find a parallel with the present. Some who seem to be in the "soup" have done their utmost to pour cold water on to things, and have assumed the prophet's role. No doubt their expressions of disappointment are the direct outcome of being caught, for those who some two months ago sold forward both Merino and crossbred tops at a thick penny less than to-day's current prices, naturally feel their present ignominious position. All along we have been optimistic, and in face of a world-wide consumption, we could never see any chance of wool values declining. Those whose business it is to study carefully the actual standing of the raw material have decided that with there being a developing consumption all through the season, there was nothing for it but stiffening values, and in Coleman Street this series the world has seen how strong wool is, and that satisfactory prices are obtainable for good material. One has

only had to pass in and out of Coleman Street Wool Exchange to find an illustration of the brisk manufacturing conditions which obtain throughout Great Britain, the Continent and America. All buyers alike have stated candidly that they need the raw material, and the whole trade being practically in the same boat has led to a very active series indeed. As a matter of fact, wool has sold remarkably well, and prices to-day are distinctly higher than they were at the corresponding sales a year ago.

Merinos Sell Splendidly at Higher Values.

Those who want quality will be able to have their fill during the next twelve months, but those in search of length, soundness and strength of staple will have to be content with less robust wools. Drought always plays havoc with both pastures and sheep, and when the latter are on short commons, a distinct mark is soon left upon the growing fleece. There is about the Australian new clip that hunger fineness which means less spinning property, and the majority of the clips are also deficient in length, and distinctly heavier in condition. Yet for all that, the

prices realised at the recent auctions are in many cases 2c per pound more than what wools from the same station made at the corresponding series a year ago. It therefore looks as if in the aggregate pastoralists will receive very little less, if any, from their coming season's clip than they did a year ago. But that fact does not atone for a deficient staple. Topmakers, spinners and manufacturers want good wool out of which to produce satisfactory fabrics, and this series there has been an exceedingly strong demand for



THE MUCH FAMED ROMNEY MARSH

We need waste no space in calling the reader's attention to the quantity of wool which has been available except to say that the 143,000 bales have not been too much for the trade to lift easily. We are now practically at the end of the last Australasian clip, and had there not been a nice show of Queensland new clip, also new season's wool from West Australia, and a few clips from New South Wales, the offerings would have been very poor indeed. This leads one to briefly state that the new clip from Australia gives unmistakable signs of being badly grown.

those lots which have shown a fair length, and which have been sound. All through the auctions an exceedingly keen buying spirit has been in evidence, but although the Continent has been well to the front, we have seen times when its buyers have taken more wool. The Yorkshire trade has been very much in evidence, topmakers and spinners being keen buyers. The fact is, business with them must be good, otherwise they could never have paid the figures they have, and scores of instances could be given of lots put up in July and withdrawn, which

this series have made from 1d to 2d more than was then bid. Some fairly large weights of speculator's lots from Victoria and New South Wales have been catalogued, which buyers have been only too glad to value because none better were to be had. This is really the time of the year when anyone having this class of staple to offer cannot do better than submit it, for when straight station clips are not available, buyers have no alternative but to confine their attention to these second-hand parcels. The result is that some very handsome profits have been reaped by importers, 28 cents to 30 cents being paid every day for well grown Merinos from West Victoria and New South Wales. All these classes must be called 1 cent dearer than last series, but the most marked advance is seen in ordinary topmaking wools, and here the improvement is 1 cent to 2 cents. A much stronger demand has also been experienced for scoured Merinos, and Queensland has supplied the trade with some really acceptable lines. It is some time since we saw Queensland new clip combing wools at 46 cents to 48 cents, while over the half dollar line has been very frequently reached for fine clothing wools. The demand has been exceedingly keen for parcels showing superior quality, and it looks as if more is to be made on these wools than during recent months. Scoured pieces, bellies and locks have sold splendidly, these often making two cents more than during last series. So far as the sale of Merinos is concerned, there has been nothing to be desired.

Strong Upward Move in Crossbreds.

The fleeces of the mutton breeds have been very strongly in evidence, New Zealand alone supplying something like 72,000 bales, or practically half the offerings. The supply of greasy wool has not been at all heavy, a much larger quantity of scoureds and slipes being catalogued. The home trade has been a keen buyer of all classes, and while topmakers always prefer greasy descriptions, there has been no lack of support whatever for the washed parcels. As a matter of fact, the advance is as pronounced in slipes as greasy, the enquiry from the trade generally being persistent and good. We cannot see that crossbreds suitable for America are any dearer than they were at the best of the July sales. When buyers are paying up to 27 cents for good lines of half-bred wools, it can be seen distinctly that fairly big figures can be obtained. Even three-quarter bred wools have sold

from 24 cents to 26 cents, while stronger classes have made from 22 cents to 24 cents. If there has not been lightness of condition and real good growth, owners have had to be satisfied with 2 cents less, but there has been no 17 cents stumpy grown Lincoln wools such as we saw during the latter half of the July series. As a matter of fact, crossbred values have all been on a distinctly higher altitude, and fine crossbreds must be called 1 cent dearer, medium descriptions 1 cent to 2 cents, and coarse qualities 2 cents up. It will be remembered that scoured crossbreds slightly lost ground towards the end of July sales, but the 1 cent to 2 cent loss has now been recovered. Considering the big weights of scoured crossbreds which have been catalogued, it is certainly some satisfaction to know that they have regained favor and sold exceedingly well.

Perhaps the "surprise packet" of the series has been the sale of crossbred slipes, that is skin wools from New Zealand freezing establishments. Where they all have come from is a mystery, but the quantity submitted only serves to show the importance of the frozen meat trade and its relation to the wool industry of the Dominion. The selection has been very choice and large. When we tell readers that fine half-bred lambs have sold up to 34 cents, and that 32 cents and 33 cents have been regular prices, it will be seen that these wools are prime favorites and going daily into consumption. Three-quarter bred lambs have made up to 30 cents very frequently, 2 cents less being an average price. Deep Lincoln and Leicester classes have made up to 26 cents, prices almost equal a few sales ago to scoured wools of similar quality. If ever it becomes possible, and we think it will, for America to center its operations upon slipes, high values will continue, and however bitter may be the complaints of some users as to their dearth, they sell as readily as any other class. The advance seen in these wools has been similar to that made for greasy descriptions. Taking the series as a whole, it has been one of the best of recent years, and the most outstanding feature has been the universal demand for the raw material, which can be taken as evidence of healthy manufacturing conditions in all consuming centers alike.

Alterations in Prices.

Considering the big quantities of scoureds which have been catalogued, it

really is wonderful there has not been any setback in values, and the way scoured crossbreds and slipes from New Zealand have sold is remarkable. Evidently users have faith in the future, for they have paid more money for every description of raw material. We give below our usual table showing what changes have taken place compared with the close of the previous series:

Australian Wool.

Greasy Merino superior—Par.
Greasy Merino average to good—1c to 2c dearer.
Greasy Merino poor condition—1c dearer.
Greasy Merino inferior locks and pieces—1c dearer.
Scoured Merino superior—1c dearer.
Scoured Merino average to good—1c to 2c dearer.
Scoured Merino inferior—1c to 2c dearer.
Scoured Merino faulty pieces and locks—1c to 2c dearer.
Greasy Merino lambs, superior—1c dearer.
Greasy Merino lambs, medium—1c dearer.
Greasy Merino lambs, inferior—1c dearer.
Greasy crossbred, fine superior—1c dearer.
Greasy crossbred, ordinary—1c dearer.
Greasy crossbred, medium superior—1c dearer.
Greasy crossbred, medium ordinary—1c to 2c dearer.
Greasy crossbred, coarse superior—1c dearer.
Greasy crossbred, coarse ordinary—2c dearer.
Greasy crossbred, lambs superior—1c dearer.
Scoured crossbreds, fine—1c to 2c dearer.

South African Wools.

Snow White, super—Firm unchanged.
Snow White, Medium—Par to 1c cheaper.
Snow White, inferior—Par to 1c cheaper.
Greasy combing, light—Firm unchanged.
Greasy combing, heavy—Par.

English Wools.

Home grown domestic fleeces continue to manifest all the sound features which I have hitherto outlined, and as the season advances, stocks become gradually exhausted. Many country dealers have nearly sold out, and have made sales more rapidly than for many years back. Almost every quality of English fleece wool is one cent dearer than a month ago, Lincoln hogs and wethers being worth to-day 22 cents, Leicester hogs 23c; Shropshire hogs and wethers 28 cents, Southdown hogs 30 cents, Kents or Romney Marsh 26 cents, half-breds 24cents; Cheviots 27½ cents; Irish hogs 26 cents, and Scotch Blackface 18 cents. These are all excellent prices. They are better than we have seen for

some years, and unless the Balkan war brings about a financial crisis, which I do not anticipate, I should not be surprised to see home grown wools still dearer before Christmas. Trade continues to be healthy and sound, although this week a little more cautiousness has been manifested, entirely due to the Balkan trouble. Still, everything is sound and firm. Skin wools are "stinking dear," slipes and scoureds also fetching more money than for many years back. America is still buying moderate quantities, the Bradford shipments to the United States for last month being as follows:

Wool:	Sept. 1911	Sept. 1912	Increase
	lb.	lb.	lb.
British...	11,364	75,999	64,635
Colonial....	17,087	49,840	32,753

Looking Ahead.

It may be as well at this time to briefly epitomize the factors which are causing wool to occupy such a healthy position, and to look forward to the next few months. There can be no doubt as to the great consumption which is everywhere in evidence, and the incoming of America has been an important factor in causing wool to assume a stronger face. Trade everywhere appears to be good, and consumption is large, this really being the secret of the healthy position which wool occupies. The whole trade is now face to face with the beginning of a new Australasian clip, and to be very candid, spinners and manufacturers do not like having to start importing with 64's tops at 56 cents and 40's prepared at 30 cents. The contention of all seems to be that these figures are too high to be absolutely safe, and that values ought to ease at least 3 cents to 4 cents per pound to pave the way for a successful season's trade, and to warrant satisfactory margins. Many contend that the present needs of users have to a large extent been the prime cause of values moving to a higher altitude during the recent auctions, and that when the London sales finish, there is a reasonable chance of a slight ease in values. There may be or may not be, and no man can tell. A new season is opening with very little forward selling having been done, which is all in favor of a satisfactory season's trade. No serious attempt has been yet made either on Continental terms markets or in Bradford, to sell down prices in the hope of affecting Australian selling centers. The fact is, the raw material seems to be so strongly entrenched that no party will risk the future. The certain shortage

in the Australian clip is also another "bull" factor which is having its effect upon users. Hence, as one looks forward, he cannot but be impressed with the almost impregnable position the raw material occupies, while the unwillingness of importers to sell forward is also not without some significance. It is quite likely that an attempt will be made to lower prices in order to obtain wool cheaper at the sources of supply, but no one dare venture too far down the slippery ice, and as far as one can see there is every probability of wool continuing to sell freely at prices not far off to-day's level. Our contention is that so long as the present consumption is maintained, wool values cannot suffer a great deal, but at the same time we think it unwise to push prices higher, for with every advance a more dangerous situation is created. It looks at the moment as if a hand to mouth policy will be the best, and the trade cannot do better than simply go steadily on and await developments.

Frozen Meat at Smithfield.

The supplies continue to be heavy, and prices are still weak. Frozen lambs are a very difficult sale, but mutton meets with a fair enquiry at current rates.

Wholesale price per pound.

Scotch Mutton.....	17c to 17½c
English do.....	16½c to 17c
New Zealand do. best.....	9½c
Do. (seconds).....	9c
Australian Mutton (prime).....	8½c
South America.....	8½c
New Zealand lamb (prime Canterbury).....	12c

New Zealand Mutton.—The imports during the past four weeks amounted to 144,030 carcasses, which show a considerable falling off when compared with the preceding month, but the total quantity received during the year to date amounts to 2,150,756 carcasses, showing a substantial increase, when compared with the 1911 figures, of nearly half a million carcasses. Business on the whole may be considered satisfactory, more particularly when a comparison is made between the values ruling to-day and the corresponding period of last year, there being an advance of fully 1½ cents per pound on mutton.

Australian Mutton.—The arrivals during the period under review only total 11,330 carcasses, while for the nine months 1,350,425 carcasses have been received, and there is a decrease for the year. The shipments made in September only amounted to 12,750 carcasses, so the supply on hand is very limited.

Frozen Lamb.—For the past four weeks

the receipts comprise 1,3174 carcasses from New Zealand, 998 carcasses from Australia, and 25,280 carcasses from South America. Up to October 11 there has been a shortage compared with last year of 650,695 carcasses, of which New Zealand showed a decrease of 288,499 carcasses, Australia 209,555 carcasses, and South America 152,641 carcasses. The Australian position with regard to supplies is unfortunately again prejudiced by the period of dry weather experienced early in the year, which was responsible for very short lambing in many districts. New Zealand lamb has been slowly declining in prices during the month, although the actual figure does not amount to more than from ¾d. to ¾d. per pound Canterbury being now quoted at 11 to 11½ cents per pound. A few light shipments are still afloat, but the total quantity to be disposed of before the new season opens is quite moderate, and need cause no anxiety to importers, as there always seems to be a sale for a limited number of frozen lambs even in the most unseasonable weather.

AMERICAN NATIONAL LIVE STOCK ASSOCIATION.

The Sixteenth Annual Convention of the American National Live Stock Association will be held in Phoenix, Arizona, January 14, 15, 16, 1913. Special rates have been granted on all railroads and preparations have been made for a large attendance.

The American National is one of the oldest live stock associations in the country and has rendered inestimable services to the live stock industry in many ways. During late years under the wise direction of its efficient secretary, Mr. T. W. Tomlinson, this association has been especially active in securing reductions in freight upon live stock, which reductions in the aggregate have saved the Western shippers hundreds of thousands of dollars. The association has always been active in urging the maintenance of a tariff upon live stock products and its influence in this direction has been very great.

As the incoming administration is thought to be unfriendly to the live stock industry it is of unusual importance that every stockman do all within his power to encourage and support the live stock associations, for it is only through these that the greatest dangers may be averted. We therefore urge every wool grower within reach of Phoenix to attend the American National Live Stock Convention and assist in making its power greater throughout the nation.

CLIP CHANGING CHARACTER.

Within the last two years the manufacturers who use fine Merino wool have begun to appreciate that this commodity is gradually disappearing from the earth. Only a few years back fine wool was extensively produced in all the great wool producing nations. But the fact that wool alone is not as profitable as wool and mutton has rapidly brought about important changes in the character of the world's wool, until at this time fine Merino wool bids fair to soon be classed as a luxury.

Originally, the wools of Argentine were largely Merino. Today, 80 per cent of that clip is classed as crossbred, and rather a low crossbred at that. Twenty years ago the clip of New Zealand was nearly all fine Merino. Today, more than 80 per cent of it is crossbred. Australia has naturally been the stronghold of the Merino sheep, and of the best Merino sheep in the world, and it is naturally expected that in her pastures the Merino will make its final stand. However, the immutable law of profit which has so changed the sheep industry of other countries is now making itself felt in the character of the Australian clip. Only a few years ago Australia produced an insignificant volume of crossbred wool but it is estimated that 28 per cent of the clip of 1911 was crossbred. The steady trend toward crossbreds in Australia is seen from the fact that 28 per cent of the clip of 1911 was crossbred, 26 per cent of the 1910 clip, 24 per cent of the 1909 clip, and 22 per cent of the 1908 clip. Thus in three years the proportion of crossbred wool has increased 6 per cent.

From Australian reports one is led to believe that the increase in crossbred in the future will be decidedly more rapid than in the past. It is reported that at this season's ram sales the fine wool rams did not find as ready a market as has been the case in the past, and that coarse wools were in great demand. Many stations formerly using Merinos are this year using coarse wools. In fact, this tendency to abandon the Merino has led Australia's most prominent wool paper to state, "Furthermore, it would be a national calamity if all the Merino studs disappeared. They are an absolutely necessity to the sheep and wool industry and therefore to Australia, for when fine wool becomes so scarce that it will be worth big money,

the farmers will want to breed towards the Merino, and there will be all too few fine woolled sheep available for the purpose."

It is not alone in foreign countries that the Merino is disappearing, for right here at home there has been a tremendous change toward the crossbred. Breeders of fine woolled rams experienced great difficulty in making sales last year, and the reports for the present season have been but little better. The demand has been for the coarse and middle woolled breeds, and so insistent has been the demand for this character of sheep that we feel that the supply available did not fully satisfy it. This use of the crossbred on the Merino ewe necessarily means that the purebred Merino on our Western ranges is to decrease in numbers very rapidly. In fact, there is now in the West a demand for Merino ewes that cannot be satisfied, and if it has not been met this year the prospects are that it never can be met in the future, and it would seem that the question of a supply of appropriate ewes for range uses is a matter that should receive the serious consideration of the range breeders. No doubt the Merino can be displaced by the halfblood with profit to most of the sheepmen in the range country, but the question appears as to where the halfblood is to come from after the Merino foundation has been destroyed.

The tendency toward the crossbred all over the world is merely a move in obedience to the law of supply and demand. The extreme perfection that has been brought about in the storage and transportation of mutton has made it possible for the sheep to be raised in one end of the world and consumed, while still in a good state of preservation, in the other end of the world. The world's meat eating population is gradually increasing while the world's meat producing area is rapidly decreasing. Therefore, the increased demand for meat as time goes on is going to make it necessary that the flockmaster of the future shall conduct his operations with an eye toward the production of wool and mutton if possible from the same animal. The result of this, naturally, will be the disappearance of the immense volume of fine Merino wool to which the manufacturers have had access in the past, with the attendant result that fine wool in the not distant future will become so scarce that the price at which it will sell in the market will be almost, if not quite, double the price at which it is now sold.

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AT SUGAR GROVE, ILLS.
(NEAR CHICAGO) DEC. 3,
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175 Good Yearling Hampshire Ewes, Bred from Imported Stocks.

50 Choice Imported Shropshire Ewes. Bred by Sir Richard Cooper.

25 Choice Imported Cotswold ewes.

All Ewes are bred to noted Imported prize Rams.

Also have a number of Imported and Home Bred Rams of above breeds.

These are a prime lot of sheep, but owing to a change in our plans, we are going to dispose of them at your prices.

This sale is during the International Show. Special trains from Union Depot 8 a. m. to 9:30 a. m. See Cooper men at trains, or write for full particulars to

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Farm, Sugar Grove, Illinois.

Sheep Needed on the Farm---By W. C. Coffey

IT IS more or less natural for us to think of the sheep industry as belonging to the west, to sections where land is cheap and range extensive, to those parts where railroads are scarce and the marketing of the more cumbersome products, difficult. The people of the corn belt have not sufficient regard to their region as sheep country.

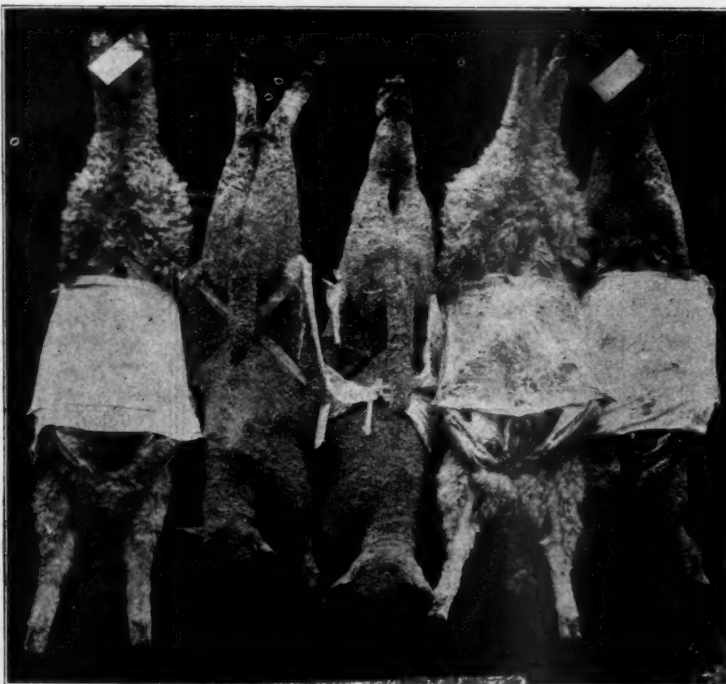
I feel reasonably sure that there are many mistaken notions about the adaptability of sheep to certain kinds of lands, and that these notions have operated against a great number of sheep in the corn belt. I believe there are few well drained farms in this region where a small flock of sheep would not do well if properly cared for. And probably in no other way can sheep be handled to yield a larger profit on the investment involved than in the small flock. There is nothing new in this assertion for it has been made time and again by those who have had experience, and therefore know. A prominent farmer in Illinois, and a man who is essentially a grain farmer, makes the unqualified assertion that a small flock of ewes will return their first cost in net profit in one year. He figures as follows. The lambs from the ewes will sell for what the flock cost. The wool will pay for the keep of the whole flock. The ewes will be left, and they usually sell for more than they cost because they are in higher condition than when purchased. Remember, this farmer claims these profits only in case a small flock is kept. He can make this claim because the sheep consume and are largely maintained on what could be utilized in no other way. If the flock were large, it is obviously true that a proportionately greater amount of expensive feed would have to be given, and the extremely large profits here represented could not be realized. But the sheep population of Illinois could be increased five fold without putting large flocks on the farms. If it were increased five fold we would have less

than 25 sheep on every 160 acres of farm land. Increase it five fold and we would add to the revenues of that state \$5,200,000, in wool alone, or more than her present total valuation of both sheep and wool. Such an increase would add in all about \$20,000,000 to her farm revenues. Surely this amount of money is worth considering. And what is true of Illinois in this particular is largely true of other corn belt states.

Many of our farmers do not keep sheep and give as their reason that they have never handled them and do not understand them. This is not a bad reason to be sure,

kept on the farm they should be managed—they should be cared for. And to say that they will utilize that which would otherwise be considered waste is not to say that they require no care. Care should begin the day the breeding flock is purchased, because the successful rearing depends upon selecting large, strong, vigorous ewes with good constitutions and the ability to eat and digest sufficient food to insure a full milk supply. Such selection presupposes that these ewes be free from any infection that will sooner or later reduce them in health and thrift. This latter is a very essential point because

one of the most discouraging features to flock management in the corn belt is the frequent infestation of internal parasites which reduces the flock in condition and often results in the loss of a number of the lambs. The worst of these parasites is the stomach worm. If they are present in large numbers it is impossible to keep mature sheep in good condition and badly infested lambs often die. Once these parasites get into the flock it is very difficult to get rid of them, and hence great care should be exercised in an effort to get ewes and rams free from them. It is said that the sheep upon the western ranges are not troubled by these parasites. Hence for the beginner in sheep growing I think it would be in many cases advisable to buy these thrifty western sheep for foundation stock. Be sure, how-



REAL SPRING LAMB

but there has been a lot of talk to the effect that it takes special training and an almost instinctive aptitude for sheep before one may expect to succeed with them. This is true only in so far that the person in question have the preparation and the good common sense to care for any kind of live stock, with a view to making it profitable. In their care and management there is involved no subtle art which comes to but few men.

But in the successful management there is required some care, some attention. No matter how few or how many there are

ever, that they are direct from the range. Then if equal care is taken to secure a ram free from stomach worm a healthy flock can be established. And here, I believe I will reiterate a statement that I have often made that dogs and disease can be kept out of a flock that it will always yield a profit. But getting a ram free from this infestation often presents a real difficulty because many of the flocks in which rams are produced are infected. If you, in the least, suspect that the flock from which the ram comes is infected, do not give him a free run with

the flock. Confine him to a grass lot into which the ewes are never allowed to enter. Nor should they be allowed to run on land immediately adjoining this lot. During the breeding season place the ram with the ewes for a short time each day in some enclosure where there is no vegetable growth. Such proceeding may appeal to you as troublesome. It is, I grant it, but I think it will pay. It is no more trouble than you will surely undertake if you have sick animals, and far less discouraging.

The western ewes I have referred to are often objected to because they contain Merino blood, and are not as comely in appearance as the more tidy, blocky native ewes. Not infrequently they have a fold or wrinkle on the neck, and this is not liked by many farmers, however, if care in selection is exercised western ewes that are fairly good in form can be secured. Their fleeces are close and compact and thus they are better protected from the variations in moisture and temperature than the average native ewe. Then, too, they usually shear more pounds of wool, and thus realize the owner more money from the wool product. As a rule they are good sucklers and if mated with a ram of the correct market type they produce lambs which if properly managed will sell as choice and prime lambs on our open markets.

This suggests the care necessary in selection of breeding rams. The ram should be active and vigorous; he should be well developed in the thighs, twist, loin and ribs, because these are the parts from which the most valuable mutton is secured. He should be deep and wide in chest, and his head and neck should show the development indicative of masculinity. He should be pure bred because such breeding in large measure guarantees that he will impress his characteristics on his offspring. Many rams are used in the corn belt that are far from being the approved market type, and a great many of them are grades, not pure breeds. In the selection of such sires we are justly open to the severe criticism of the markets. If you select grade or crossbred ewes and mate them with grade rams what may you expect in the offspring? Surely no great degree of uniformity, and this is a very important factor in the successful marketing of lambs. Breeding, however, is not the only thing that works toward securing a uniform lot of lambs, because they should be uniform not only in type and

general form, but also in age, weight, and general condition. It is necessary, therefore, to endeavor to get ewes that will all breed at about the same time. And if they all breed at about the same time the ram is put to very heavy service for a short period, which means that he should be very active and vigorous as already noted.

As producers of market lambs sheepmen of the corn belt are criticized for not getting their animals fat before marketing. The producer should realize that if his lambs are to sell well it is just as necessary to have them fat as it is to have a pig fat when ready for market. Many times producers do not know that their lambs are not fat because the wool conceals the true condition of the lamb in moderate condition unless the hands

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We have for sale this year 3,000 Registered and very high grade Cotswold Rams of best breeding and merit. Have bred for the heavy, blocky type with good constitution and heavy fleece of long lustrous wool. Range raised under most favorable conditions. Offered singly or in car lots.

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Send us your address, we will mail you literature on the breeding of Karakule-Arabi sheep for the production of Persian, Astrachan and Krimmer lambs; wholesale furriers quote our half and quarter-blood Karakule-Lincoln skins eight to fifteen dollars each. Mutton increases in weight and price. Address,

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Exporters of pedigree live stock of all descriptions

Mr. Hickman is visiting America again this year to meet many old friends and to make many new ones.

From November 22-27, his address will be Hotel Martini-que, New York.

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We make a specialty of draft horses of all breeds, in which we handle large numbers, and we can offer propositions much more attractive than can be obtained elsewhere.

We also export very large numbers of sheep for both show and breeding purposes. Our prices on big runs of field rams of the English breeds are more attractive than American breeders have yet experienced elsewhere, owing to our methods of buying and shipping direct from the seller to the breeder and thus saving many heavy expenses.

With beef and dairy cattle booming, we also expect to take many orders in most breeds.

Many an American farmer works hard from morning to night all the year round and earns perhaps \$5 more or less, per day. Many another man earns more in an hour than he does in a week, through working hard with his brains. Knowledge means both money and power, and every American who is ever likely to want imported stock and does not take this opportunity to see our Mr. Hickman and learn all he can about the business, is too slow to live.

are placed on the animal. If the touch shows the spine and ribs of the animal to be prominent it is a sure indication that the lamb is too low in condition to sell well.

Again, we are criticized for not castrating the ram lambs. It seems that the producers have an idea that a ram lamb will grow faster and hence sell for more than a wether lamb, but in the majority of cases this is untrue. When the ram lambs become about three months old their sexual instinct becomes developed to such a degree that they begin fighting among themselves, and teasing at females. This fretful activity not only reduces them in condition but all others in the flock. They also develop a coarseness, which combined with their thin condition places them in the cull grade when they reach the market. It is estimated that these coarse, bucky lambs sell for at least \$1.00 per cwt. less than they would have had they been castrated. On a hundred lambs weighing 80 pounds each this represents a loss of \$80.00 not taking into account the loss in weight due to their fretful activity. This is a loss that ought to be prevented. There is no more likelihood of loss of lambs through castration than there is of pigs, colts or calves. Perform the operation when the lamb is no more than two or three weeks of age and with dispatch, and serious results are unlikely.

During the past six years there has been an almost constant demand for fat native lambs. The supply most of the time has been far under the demand. Each year the open market has loudly lamented the lack of a sufficient number of good ones. In the well managed flock lambs make gains at comparatively low cost. The farmers of the corn belt are neglecting an opportunity when the lamb is no more than two or three weeks of age and with dispatch, and serious results are unlikely.

OUTLET FOR AUSTRALIAN MUTTON.

Under date of October 5, an associate press dispatch from Berlin, Germany, stated that on November 6, a steamer with a consignment of 100,000 carcasses of mutton would leave Adelaide, Australia, for Hamburg, and that this was only the first of a regular number of shipments. It is also reported that some months ago Australian authorities sent an experimental shipment of fifty carcasses of Australian mutton to Germany and that this

received such a favorable reception that the permanent exportation of large quantities of mutton from Australia to Germany has been decided upon. Many were sceptical as to the reception that the cold storage mutton would receive in Germany for Germany has not been a mutton eating nation. Last year only two and one-quarter million sheep were slaughtered in Germany, practically all of which were raised in that country. However, the advanced price of all kinds of meat has made it imperative that the Germans obtain additional supplies wherever possible. Germany imposes a high tariff on meats, and in addition imposes sanitary restrictions which enable her to exclude any meats that she does not desire imported.

MONTANA WOOL GROWERS MEET.

On Thursday, September 26, the Montana Wool Growers Association held their annual meeting at Helena. The meeting was fairly well attended, not, however, so well as it should have been, but what it lacked in numbers was made up in the enthusiasm exhibited by those who attended. Mr. Miracle of Helena had been president of the association during the past year, and John D. Holliday, also of Helena, its secretary. Both of these officers had rendered most excellent service to the sheepmen of their state, and through their unusual efficiency had very greatly increased the membership of the Association and had been able to do much to improve the conditions of the flockmasters of that state.

The officers of the Montana association have never received from the wool growers of Montana the hearty support that their efforts have merited. This lack of support seems to be accounted for by the indifference of the average wool grower towards all organized effort in whatever line. However, in the absence of this support the officers of the Montana association, and the few men who have been standing loyally by them, have gone forward untiringly and devoted their best efforts to the welfare of the industry. At the meeting of the National Association in Omaha the Montana Wool Growers Association pledged themselves to raise \$3,000 toward the expense of the National Association, and Mr. J. B. Long, of Montana, agreed to increase this by another thousand. This was very decidedly the largest offer made by any state and to the credit of the wool growers of Montana be it said

that they carried out their promises to the National and thus enabled the National Association to go on with its work without having to abandon many of the things it had undertaken.

The wool growers of Montana should not forget that while the National Wool Growers Association brought the suit for a reduction in the freight rates upon wool, the Montana association made it possible to bring this suit to a successful issue by the excellent financial support which they gave. Without the support of the Montana wool growers it is probable that the National would not have been able to have carried forward all the work that it has undertaken.

The wool growers in Montana, who understand the nature of the work that has been done by the officers of their organization are very loyal to the association, and they strongly urged that the various officers be continued in office for another year. However, neither Mr. Miracle nor Mr. Holliday could see their way clear to assume the responsibility and the association elected as its president Mr. C. H. Williams of Deer Lodge, and as its secretary, Dr. T. M. Hampton of Helena. Mr. Williams is one of Montana's progressive citizens who has long been interested in every movement tending to better the conditions of the people of that state. At the Omaha convention he subscribed \$200 to the National to assist in its work, and whenever he has been called upon he has been found willing to do his share to better the conditions of his fellow flockmasters. As president of the Montana Association we bespeak for Mr. Williams a most successful tenure, and every wool grower in that state owes it to the association to get in behind it and help make it the power that it ought to be. Dr. Hampton is a resident of Helena, and has for a considerable time been interested in the sheep business. He has always attended the meetings of the association and taken an active part in making them a success. Dr. Hampton is an untiring worker and has the welfare of the Montana sheep industry at heart and if the association fails in its work during the ensuing year it will be because the average wool grower of Montana has not given it the loyal support that it is entitled to. We ask every wool grower in Montana to join the Montana Wool Growers Association. You need it and it needs you more during the forthcoming year than ever in the past.

RAMS THAT PAY



I have for Sale

600

two year olds,

1,500

yearling Rams

also

1,200

yearling Ewes.

All pure bred Rambouillet, large, well covered. The wool and mutton kind.

**CHAS. A.
KIMBLE**

Hanford, Cal.

DOING FAIRLY WELL.

Something over a year ago the Interstate Commerce Commission began an investigation of the charges made by the Pullman Car Company. The Commission determined that the charges were excessive and ordered this company to charge 20 per cent less for an upper berth than they had been doing. The Pullman Car Company put up a mighty howl, assured the country that it would bankrupt them, and that such action on the part of the commission was confiscatory.

The fiscal report of the Pullman Car Company ending July 31, 1912, discloses gross earnings \$1,225,000 in excess of those for 1911. In fact, last year gave the greatest gross earnings in the history of the company. The net earnings of this company last year were \$1,670,000 greater than they were the previous year and the net earnings were never exceeded except in 1910. The earnings for the Pullman Car Company for the fiscal year just closed proved to be 14.41 per cent on a capitalization of \$120,000,000, against 13 per cent for the previous year.

These figures must indicate that the solution of the trust problem of this country lies in regulation by an administrative commission. Not a single regulatory provision which has been applied to any of the great corporations of the country has as yet injured them, and an examination of the earnings seems to indicate that the rulings of the Interstate Commerce Commission have not only benefited the consumers of the country, but they have decidedly benefited the corporations, even in the face of their opposition.

LAND SALE.

Recently a great number of land buyers from all over the country met at Billings, Montana, to attend the sale of 350,000 acres of government land in that vicinity. The government had placed a minimum price of \$1.50 per acre on the land, but practically all that sold commanded a figure much in excess of this. The highest price paid for land was \$25.50, for land suitable for flax growing in the vicinity of Tulcea. All lands that were at all suitable for dry farming sold at from \$6 to \$12 per acre, and even the range land is reported to have sold at figures twice as great as they could have been purchased for two years ago. The average price for the entire tract was \$5 per acre.

BLACK LEAF 40

A Concentrated Solution of
NICOTINE SULPHATE,
Guaranteed to Contain Not Less
Than 40 PER CENT NICOTINE, By Weight.

Nicotine in the form of "sulphate" does not evaporate at ordinary temperatures, whereas "Free" Nicotine does evaporate. Therefore, "Black Leaf 40" is particularly desirable for sheep dipping purposes, wherein the lasting properties of the dip are so important.

"Black Leaf 40" has better "lasting" properties than has even our "Black Leaf" Extract. It is about fourteen times stronger, yet with only about one-twelfth the shipping weight. This means a big saving in handling—especially over rough roads. One case of ten 10½ pound tins may be carried in a buggy, gross weight only 150 pounds, yet producing 7,170 gallons of "Official" wash against sheep scab.

Owing to the large dilution, "Black Leaf 40" Does Not Stain nor Injure Wool.

"Black Leaf 40" is non-poisonous to sheep and goats at the Official Dilution.

"Black Leaf 40" is permitted for Official Dippings of Scabby Sheep—both under the United States Government and the State Regulations. No Sulphur is Required.

PRICE:

10½ lb. can, \$12.50—makes 717 gallons, containing "7-100 of 1 per cent Nicotine"

3½ lb. can, \$3.35—makes 170 gallons, containing "7-100 of 1 per cent Nicotine"

½ lb. can, \$0.85, makes 34 gallons, containing "7-100 of 1 per cent Nicotine"

These prices prevail at ALL Agencies in railroad towns throughout the United States.

If you cannot thus obtain "Black Leaf 40" send us P. O. Money Order and we will ship you by Express prepaid.

Manufactured by

**KENTUCKY TOBACCO
PRODUCT CO.**

INCORPORATED

Louisville, Ky., U. S. A.

Sheep and Sheep Dogs

WITH a bunch of ewes in every way suited to his environment a sheep grower is in a strong position where he can breed to a certain extent to suit the market by using such bucks as he thinks most suitable for sale, so long as he breeds enough ewes to maintain his own ewe stock. Whilst I have handled small bunches of purebred stock, for the most part there is no question that crossbreeding has its place, and this is specially true of sheep breeding, crossbreds in all countries occupying a very important place in the markets.

For breeding stock it may be necessary to correct faults within the breed itself, but for commercial purposes a ram of another breed will often work wonders in the first cross, bringing almost perfect lambs.

The flock may be of a breed that, notwithstanding other excellencies, is deficient in leg or good covering over the back, and a buck from a breed strong in one of these points will correct such deficiency, to much legginess, lack of bone, or whatever is radically wrong, as a rule, quicker than a buck or bucks of the same breed as the ewes subject to the same deficiencies, even though he may not show them strongly himself.

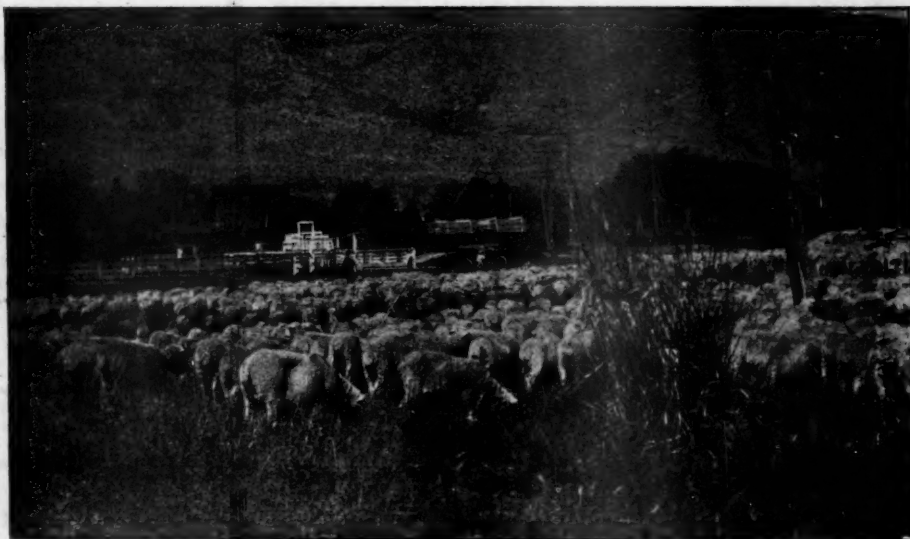
There is as a rule a strong virility in first cross stock, and in many the fleeces blend well and are in good demand. At the first cross one is usually obliged to stop, and if it is carried forward it becomes necessary to re-cross on the type that the breeder wishes to prevail either by line or inbreeding, so that as much is as a rule lost as is gained except in very skillful hands.

Line and inbreeding no doubt often account for constitutional weakness, and yet they have been found to be almost a neces-

sity if prepotent stock of uniform character was to be produced. As a rule observation will show that close breeding has been carried on successfully only by those who have consistently selected the strongest and most virile animals with which to carry on, and that those who acquired animals with the pedigree without these characteristics have only met disappointment and loss. Another cause of failure has been the selection of animals to form families which could not transmit desirable qualities to their descendants unless very closely bred, whilst other more prepotent strains could do so with a very slight infusion of their blood and without a relationship so close as to cause

that they were not popular in other districts than those where the environment had produced exactly what it required for best results under such circumstances. With no outlet but slaughter for the surplus, only the best were retained for breeding purposes, and any ill results of inbreeding minimized in fact, it is open to argument if robust constitution is not emphasized by inbreeding where it is present in both parents unless carried to extreme limits. No doubt in old days outside crosses were occasionally introduced in flocks and herds both by estrays and of a purpose, but with the intensity of the home bred stock so concentrated outside influence so far as appearance went was soon lost.

With the larger country in the west and the great mixture of breeds that has taken place there is a lot of malleable material which, having no strength of blood of its own, will reflect almost immediately the type of ram used, and with a few crosses of the same breed be almost of the same appearance as pure bred, whilst the cross of two distinct breeds will in the second generation show



LOADING SHEEP AT UNION, OREGON

any weakness.

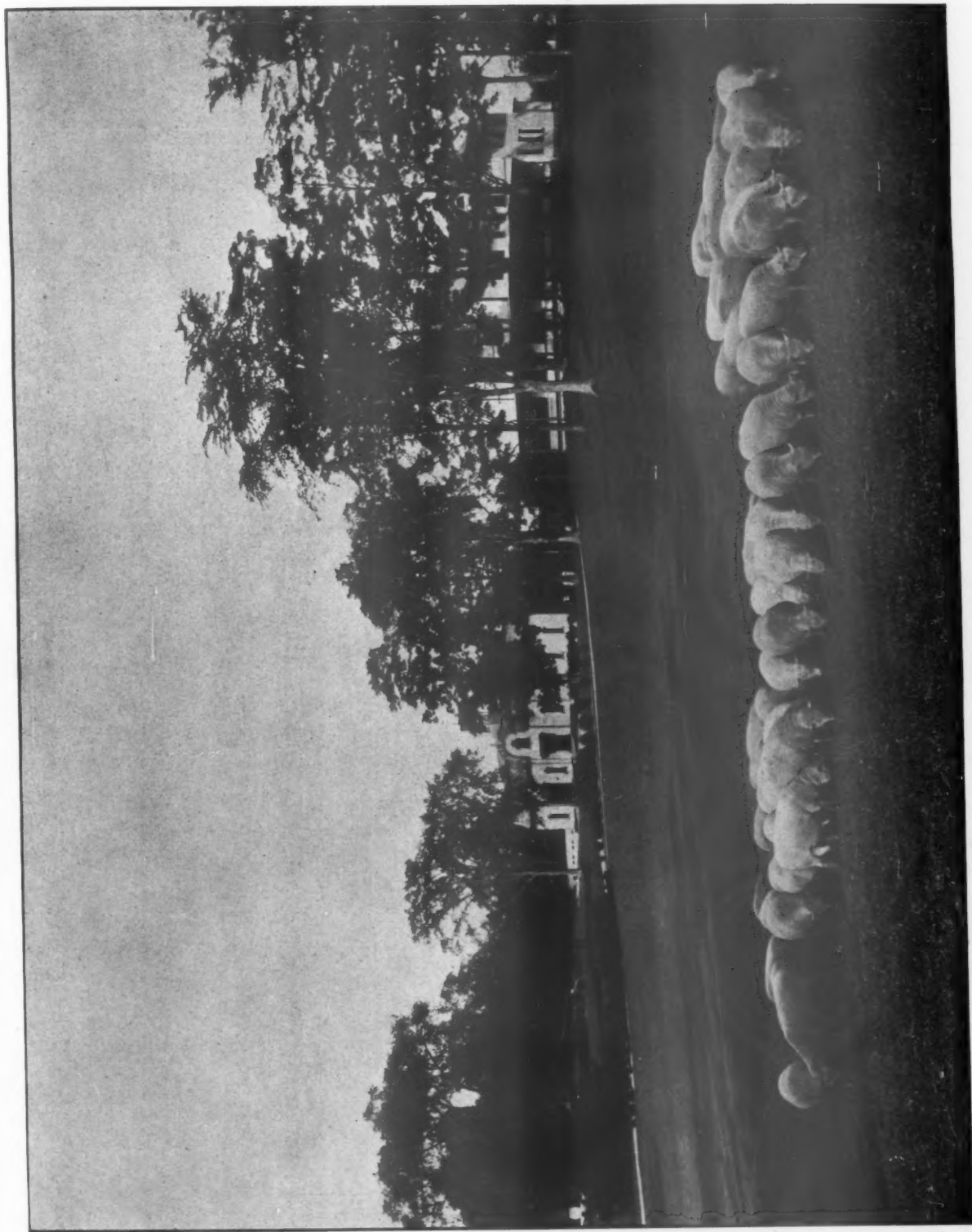
The Dorset sheep is probably very closely bred as they come from a comparatively small district and a very small infusion of their blood, often as little as an eighth, will give their breeding habit of producing lambs at any time of year to other breeds, though this would be probably less marked with the Merino than some other breeds, such as, say the Hampshire, which shows in its ear a relationship to the Tunis, another sheep with the twice-a-year lambing habit when well fed. It is surprising what strength of constitution British breeds show when the length of time they have existed before herd and flock books is considered, and the real reason is probably to be found in the fact

great variations.

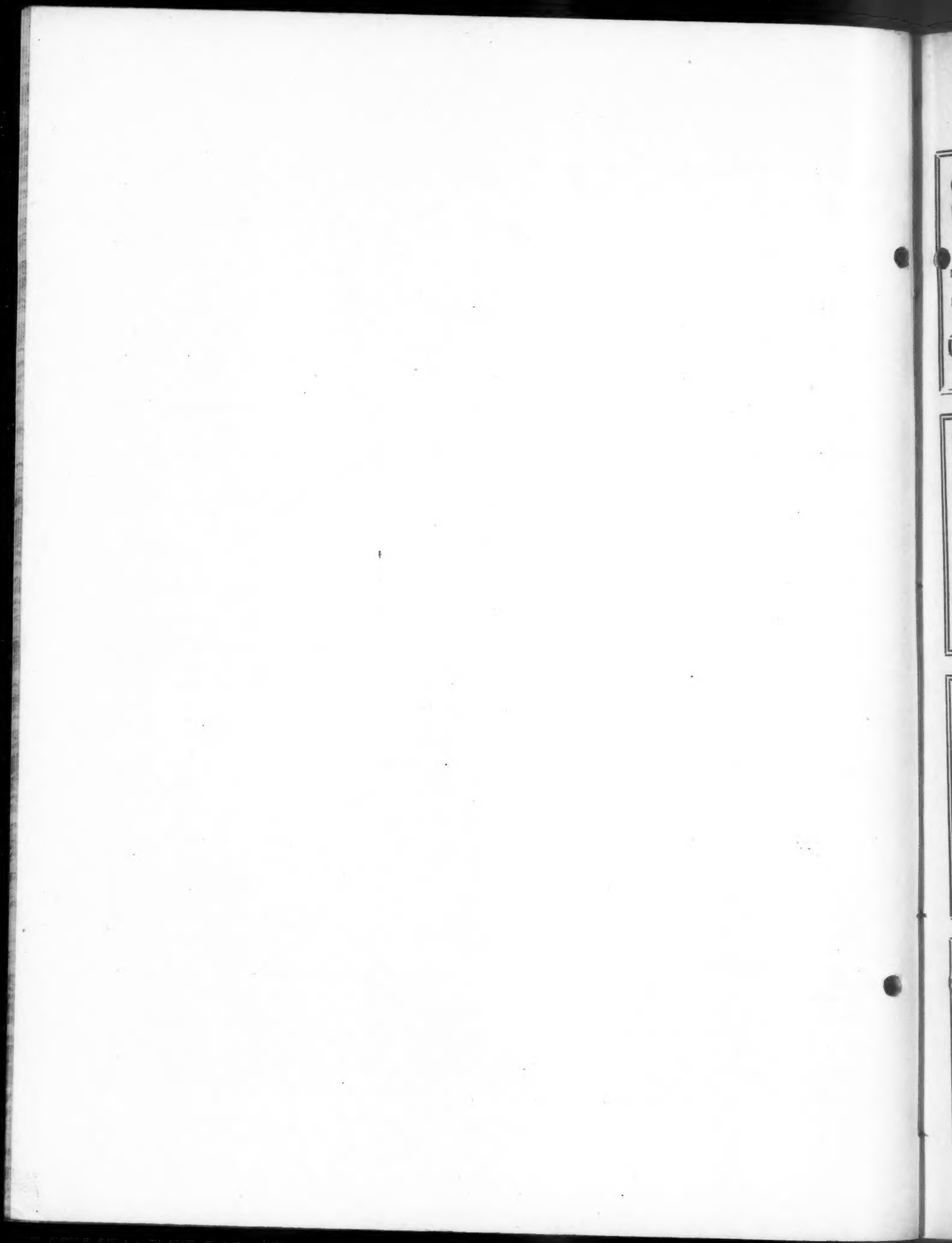
Of late years, largely on account of the devastation of stomach worm, there is great demand for Western ewes in such states as Kentucky, Ohio and Tennessee, and there is an outlet for Western ewes carrying so much mutton blood that they have largely lost the Merino's adaptation to herding in large flocks, and the puzzle of what ram to use next is solved for the breeder by the ewes passing from the range country to one where their offspring can roam at will in fenced pastures no matter how much more the roaming habits of the British sheep may have become intensified by more mutton crosses.

Opinions differ very much as to how much mutton blood can be used and sheep

42a



SOUTHDOWN EWE FLOCK, OWNED BY BUREAU OF ANIMAL INDUSTRY, MIDDLEBURY, VERMONT




**WOOL
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LUDLOW FINISHED, INDIA

No. 4 1/2 is the best twine for tying fleeces.

Insist on your dealer supplying you with this twine.

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I HAVE FOR SALE REGISTERED HAMPSHIRE EWES AND RAM LAMBS.

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RUSSELL, KANSAS.

still herd conveniently, and much of course depends on the system of herding, open or closed bed grounds, and also the character of the country in which sheep are to be pastured. The opinion, however, seems about universal that at some point mutton sheep will not herd under Western conditions.

In Australia, though the runs are largely fenced, yet herding is often necessary. Much greater reliance is placed in dogs than here, and for the mutton breeds wide ranging collies are used, or the quieter English sheep dog, whilst for Merinos a dog with some Dingo or wild dog blood is used. This half or quarter wild dog works very wide seldom approaching the sheep closely, which suits the alert Merinos who are quite willing to take a hint and whom the English and Scotch dogs crowd and hustle unduly. There is a Welsh dog much in favor for stock yard work and crowding sheep in pens for shipping or shearing. He will work from side to side over the sheep's backs when necessary. And there is also a wider working Welsh dog usually, I believe, a merle or blue, with black spots. The Australian government has both bred and encouraged the breeding of suitable sheep dogs to aid the stockman and the same difficulties had to be met with there as here in adapting breeds from wet, cool countries to one poorly watered and where the ground was so hard and dry as to be very hard on dogs' feet. "No foot no dog" is as true "no foot no horse," and a sore footed dog is less than half a dog however willing.

Perhaps soon now there will be fenced grazing for our sheep and more latitude as to their breeding and care even in very large pastures, for the eventual extermination of the coyote from mange seems well on the way and certain districts are now practically free from him. Sarcoptic mange is a terrible scourge to the coyote and in his last weakened stages towards death he becomes a mere dooryard prowler and chicken thief, often dying around the barn lot, or almost on the doorstep where he has been scavenging around the house. Almost any dog can kill him when thus weakened, or at least hold him at bay to be shot, and it is a mercy to inaugurate Winter hunts to relieve this pest from his sufferings which are much less in Summer, perhaps not so much more grievous than the multitude of fleas with which he has always been afflicted. In Winter, however, the loss of his protective coat of hair is a terrible hardship, and he soon becomes weakened and unable to hunt wild game and thus much more easily killed even when he does not die of this disease.—Lord Ogilvy.

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SHEEP ASS'N.**

Organized in 1889. Membership fee \$5.00. Pedigrees now being received for Vol. XII of the Flock Record. Write the Secretary for information and printed matter. A postal card will bring it. Write to-day.

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This Association annually publishes the increase of the flocks, keeping the lineage by name and number of every animal so recorded.

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Lewiston, N. Y.**J. M. WADE, Secretary,**
Lafayette, Ind.

Word From the Capital

An answer to the query to why people do not eat more mutton is readily found when one attempts to purchase this meat in local eastern markets. Between the selling prices on the hoof and those charged by the local merchant is a wide difference which must be eliminated before eastern people can be induced to place mutton on the regular dinner menu. The very high retail prices asked for mutton in Washington retail markets suggested a comparison with prices of eastern cities which should prove interesting to the mutton producer. Retail mutton prices in Washington, Baltimore Philadelphia, Richmond, Boston, Pittsburg and New York were averaged, with the following results: Mutton chops 20 cents, lamb chops 28 cents, forequarter 18 cents, hindquarters 20 cents, saddle 21 cents, stewing 13 cents. An average of the wholesale price paid the producer in these cities gave 5½ cents as the usual price paid the local producer of mutton in the eastern states in which these cities are located.

When the average eastern retail prices are compared even with the top market prices paid in Chicago, Kansas City or Omaha, it is quite evident that one phase of the effort to educate the American people to mutton must be directed toward educating somebody to the fact that a less margin must be made in handling this product. Live sheep are quoted in the local Washington market reports at from 2 to 3½ cents per pound, but the parts fit only for stewing retail for 12½ cents here.

Practically all mutton sold in eastern markets—except in a few high-grade establishments where higher prices are charged—is sold as "lamb," although there is no data furnished to advise the purchaser just how many years before it was slaughtered it really was lamb. In Washington if one desires real spring lamb chops, one of the highgrade markets must be visited and something like thirty cents per pound paid for them. The average dealer in Washington will unblushingly sell two-years-old ewe meat for lamb.

Eastern people cannot afford to buy mutton, as it is higher than either beef, veal or pork. Dealers say this is because there is comparatively light demand, and at many markets in the national cap-

ital one is frequently told they are "just out" of mutton.

Western stockmen will be interested in the many changes sure to take place in the personnel of the House public lands committee upon the organization of the Sixty-third congress. With forty-three members of the House out of the race entirely, by reason of voluntary or forced retirement, committee changes will practically result in complete reorganization of this particular committee having so much to do with range and public land conditions. While there are at present but three voluntary retirements from this committee, the forty-three mentioned above added to other fatalities as a result of the election, will create an unusually large number of committee vacancies, some of which will occur in the public lands committee. Only western members desire places on this committee, which will further contribute to vacancies.

Representative Mondell, long chairman of the House public lands committee and deposed with the election of a Democratic majority, has retired as a member of that committee by reason of his election to membership on Appropriations. Mr. Mondell has been one of the most powerful advocates of the stockmen's interests in this committee, by reason of his intimate knowledge of stock conditions, and his retirement is a distinct loss.

The present chairman, Representative Robinson, will retire at the end of the session to become governor of Arkansas. Representative Smith of California retires on account of ill-health. Of the remaining Republican members, Pray of Montana was defeated. Volstead of Minnesota, Morgan of Oklahoma and Pickett of Iowa are all up for re-election and are expected to be returned. The Western Democrats still on the committee are: Graham of Illinois, Ferris of Oklahoma, Taylor of Colorado, Beall of Texas, Raker of California, Claypool of Ohio and Ruby of Missouri.

Senator Heyburn's death and Senator Guggenheim's voluntary retirement have already created two vacancies in the senate public lands committee. Both were powerful advocates for the stockmen and will be missed when future legislation is considered. Those certain to return because not up for re-election are Senators Smoot of Utah, chairman; Clark of Wyoming, Jones of Washington, Works

of California, Newlands of Nevada, Chamberlain of Oregon, Thornton of Louisiana, Bryan of Florida and Meyers of Montana. Members of this committee up for election this year are Nelson of Minnesota, Gamble of South Dakota, Dixon of Montana and Davis of Arkansas. Of these Gamble of South Dakota, and Dixon of Montana, have both been defeated.

Every prominent Australian visiting Washington during the past few months has emphasized the great benefits the United States will derive through the completion of the Panama Canal, by reason of the fact that Australia will be able to ship its meats here. The idea is of course, to tickle the average easterner with the promise of cheaper meat, but these remarks are but fair warning to the stockmen of the United States that free meats from Australia and the Argentine present the greatest menace to the industry in this country today. The latest Australian prophet to visit the national capital is Sir George Reid, high commissioner of Australia in London, who says:

"Think of the fact that we have almost twice as many sheep in Australia as there are in the United States, and you can gain an idea of just how important this shortening of the distance between the two countries will mean. There are more than 95,000,000 head of sheep in Australia, while there are only 55,000,000 in the United States.

"There are also many head of cattle grazing on the rich lands of Australia, and far more than we can use there. The canal will make it easy for us to ship cattle here, even under the present tariff. No definite plans have been made for any shipment of cattle to the United States in large numbers, but now that the canal is practically built, I am sure that the matter will be given consideration. It will eventually mean, I think, the lowering of the price of beef in the United States by the increase of production."

The Bureau of Statistics has issued an interesting statistical summary of the world's sheep, representing as complete a census as possible covering the latter part of 1911 and the first months in 1912. The grand total shows a falling off of more than 16,000,000 sheep as compared with the figures of 1895. North America shows an increase of approximately 6,000,000, while South American countries have added some 7,000,000 to their flocks in the same period. Europe shows a corresponding decrease of something over 16,000,000 head, and Australasia an increase of 7,000,000. The tremendous increase in the flocks of Asia and Africa are

particularly noticeable, the increase in the former countries for the seventeen years being over 71,000,000, while that in African countries approximates 19,000,000. The grand total of sheep in the world according to this census in 616,229,372; in 1895 the number was given as 22,609,083.

As a result of the recent election the two questions now uppermost in the minds of woolgrowers are as to the probability of an extra session and to what extent will the next congress reduce the tariff on wool, woolen products and meats.

There is little if any doubt but what an extra session will convene immediately after March 4th next. Democratic floor leader Underwood's statements in this connection may be taken to represent the majority of the House as well as Democracy generally. Mr. Underwood declares a special session will be called "shortly after Wilson's inauguration, for early action on tariff legislation defeated by presidential veto." Other Democrats whose influence approaches that of Underwood are saying the same thing. While the president-elect has not declared himself at this writing, he has declared it his purpose to act "through the common counsel of the people," which is another way of saying he will keep his ear to the ground before making any announcement.

The business world will demand an early settlement of the tariff question, and will unquestionably insist on knowing what is in store for it as soon as possible. Another and most important factor in deciding the question of an extra session is the matter of patronage. With the senate Democratic, all of the committee chairmanships must pass from Republicans to Democrats, and this can only be done after congress has convened and effected an organization. If there is no extra session, the present Republican chairmen and their employees will hold until the following December—and with an army of expectant aspirants for these chairmanships and the important appointments accompanying them it is not to be expected that the organization of the new congress will be put off almost a year.

What tariff legislation will result from the new order of things is somewhat doubtful as yet, although woolgrowers may well prepare for a substantial reduction of those tariffs in which they are most interested as a final result. While some cause for rejoicing might be found in the fact that a few Democratic Sena-

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2,500 Rams, Yearling and Two-Year Olds

For 30 years our flock has been bred with the *greatest care*---with an eye to the production of *wool* and *mutton* from the *same sheep*. We are now able to offer *rams* with a *dense fleece* of *long staple* wool, on a body of *excellent mutton form*.

Our Rams Have a Future

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The quality of our Rambouillets is that of the best sellers for the range, and with our years of experience we know we are in position to give you stock hard to beat. With ewes ranging in weight close to 200 pounds and shearing 18-pound fleeces of three to four and one-half inch staple, and rams weighing from 225 to 300 pounds, you may be sure of first class selection from our flock. We offer this season 300 Rams, yearlings and two-year-olds, and 200 two-year-old Ewes, all registered.

W. S. HANSEN, Collinston, Utah

tors are known to be in favor of protection along many lines, this must be offset by the fact that some of the progressives, classed as Republicans in the makeup of the senate, are out-and-out tariff reformers.

Of the thirty holdover senators, eight have been classed as progressives in the past. They are Bristow, Crawford, Cummins, Gronna, Clapp, LaFollette, Poin-dexter and Works. To these must now be added Norris of Nebraska and Kenyon of Iowa. These ten may be expected to favor reductions in the schedules affecting the wool and meat industries, and this materially weakens the protectionists in the senate.

One of the peculiarities of the next senate organization will be the fact of a Democratic protectionist—Senator Simmons of North Carolina—holding the important position as chairman of the senate Finance committee, which is the tariff making committee of that body. Seniority entitles him to the place, and it is not believed the new organization will attempt to disturb this long recognized practice in both House and Senate. Senator Simmons voted with Aldrich in the critical stages of the Payne-Aldrich tariff law,

and is out of sympathy with the tariff ideas of the more radical wing of his party. As chairman of the senate committee having charge of all tariff bills in that body, the senator's influence for the soft pedal may be far reaching.

The attitude of the House on tariff matters may be dismissed with few words. Underwood will undoubtedly control that body through a repetition of former caucus methods, and the tariff ideas of the Alabama statesman, as evidenced in the previous session, may well be taken as the correct tariff temper of the lower branch of Congress. The infusion of many new Democratic members will have a tendency to force the House nearer to free trade. If anything, than the tariff-for-revenue-only policy followed by Democratic majority last session. The fact that the next congress will contain a number of new Democratic members from the wool producing states of the west will have no effect on the general result. The only Democratic members of the present House with the cemerity to vote against the Democratic caucus on the wool tariff have been left at home because of their "treachery" to the party.

During the campaign great stress was laid on what Candidate Wilson believed

should be done with the tariff; soon after the next congress convenes the country will discover that congress, and not the president, will make the tariff laws. President Wilson will not dare veto any tariff measures sent him by a Democratic congress, and in the final analysis the senate's views must prevail.

HIGH COST OF LIVING.

Probably the most potent cause for advanced prices is the remarkable increase in the gold production during late years, and particularly last year. That the increase of gold may be full appreciated, we submit the average yearly production for five-year periods.

Five-year Period.	Average Yearly Production
1891-1895.....	\$163,312,506
1896-1900.....	257,905,000
1901-1905.....	323,351,925
1906-1910.....	434,504,460

The highest figure in the world's output of gold was reached during the year 1911, which amounted to \$461,548,950.

Be sure and study the old and new wool rates on page 18 of this paper.

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The Corriedale Sheep

By George D. Greenwood, New Zealand

THE Secretary of the Wool Growers Association, United States of America, having asked me to write an article giving the history and principal features of the Corriedale sheep, I have much pleasure in complying with his request. I feel myself especially well qualified to give all particulars concerning them, as I have spent a life time in evolving and perfecting this breed.

To commence with the early history of the Corriedale breed, prior to the year 1880, nearly all the sheep in this Dominion of New Zealand and Australia were Merinos, grazing on the natural pastures. Some years previous to the above date, the older ewes of the Merino strain had been mated with English Leicesters, Lincolns, Romneys, and other long-wooled sires, and the progeny were called half-breeds. These were found to be very useful sheep, inasmuch as they combined the best points of both the breeds from which they sprang, and also took kindly to the country. Seeing the utility of these sheep in the particular class of country where they were, the idea occurred to me to try and establish a distinct breed which would combine in themselves the excellent qualities of both breeds.

Therefore commenced my experiments. First of all I selected 800 of my best half-bred ewes, culling them down to 100, and mated them with a ram of the same breed as themselves. Their progeny—still half-breeds—that showed the characteristics of the best of their parents were retained, and again mated with sires of their own breed. As years rolled on other men breeding on the same lines began to realize the usefulness of the "in-bred half-bred," or Corriedale breed, and one was enabled to obtain a change of blood outside one's own sheep, from sheep bred in the same way. In every case only "in-bred half-bred" rams were used. For many years these sheep required very heavy culling, as some lambs took after the original Longwool sire and some after the original Merino dam, but as time went on less and less culling was necessary, and we succeeded in achieving our end, which was the production of a distinct type of sheep, and one which is guaranteed to breed true to type, the utmost success having thus crowned our efforts.

The settlers in this country have gradually become satisfied that Corriedales combine the most useful characteristics of the general purpose sheep. To-day, in Canterbury, N. Z., there are more Corriedale sheep than those of all other breeds put together, and they are often the largest class at the metropolitan shows.

To mention some of their particular qualities, they produce a fleece of bright lustrous wool of 50s, 56s, quality free, with splendid spinning and felting capac-

world; in fact, the high place taken in all markets by "Prime Canterbury" owes its existence to the large number of Corriedales bred in the Province, since for quality none equals the mutton of this breed. The Corriedales come early to maturity, and if kept till 2½ or 3 years old will weigh ninety to 100 pounds dressed weight; but as two and four-tooths the wethers are prime at fifty-eight to sixty pounds dressed. One of their best characteristics is their adaptability to different climates, as before mentioned. On the high mountains 6,000 and 7,000 feet above sea level they thrive as well as they do in the arid tropics of Queensland. I have sent rams to every State in Australia, South Africa and South America, from Buenos Aires to Tierra del Fuego, and am constantly hearing the most satisfactory reports of their hardihood and value. A few months ago I sent 100 rams to the center of Queensland. In the hold of the same ship there were 200 Romney rams, and the crowded and unsanitary conditions of the vessel killed over 100 of the 200 Romneys; whereas ninety-nine of my Corriedales landed safely at their destination in Queensland! My Corriedale flock at Teviotdale is easily the oldest, largest and best woolled flock of that breed in the Dominion of New Zealand. In the show ring they have taken numberless champion, first and second prizes. Moreover, where they have been tried outside the Dominion—in Argentina, Tierra del Fuego, and Australia, they have given the greatest satisfaction. In Tasmania at the Launceston show they took all the prizes.

In 1904 the London brokers, Messrs. Du Croz, Doxat & Company, wrote thus: "Mr. G. D. Greenwood's

Teviotdale clip of Corriedale wool has a softness and silkiness combined with density of staple that shows great spinning qualities. It is bright, with a slight blue tinge, the latter always an indication of good color when manufactured. Being fine in quality, and always much scarcer than the bulk of cross-bred growths, it creates keen competition and realizes high prices." In May, 1906, 1s. 4½d was realized for the best line of this wool.

In past times many attempts have been made to establish a distinct breed of sheep between the Merino and long-wooled



A CORRIEDALE RAM

ity, varying in weight from thirty pounds for best rams down to eight or nine pounds for wet ewes. These sheep are most hardy in adapting themselves to any condition of life, and thrive excellently, not only in the place where they were first experimented with, but in climates utterly different, both as regards heat and cold likewise. They are exceedingly prolific, 120 per cent of lambs being not uncommon. The lambs are often frozen at three to four months old, and then weigh from thirty to forty pounds. The mutton produced is of the very prime quality in the

breeds, so as to retain the best qualities of both, and many failures have had to be recorded. It has remained for New Zealand flockmasters to succeed where so many others had failed. The general utility of the first cross between the Merino and Leicester or Lincoln has long been acknowledged, but the difficulty was to blend these widely different breeds, so that the product of the cross should maintain and transmit the best features of both breeds. Thus, by scientific selection and mating, this Corriedale strain has been evolved, and now stands as a distinct breed, guaranteed to reproduce itself true to type, and also to transmit its distinctive characteristics when crossed with other breeds.

A breed so useful as the Corriedale has come to stay, and despite many prejudices and much opposition from owners of other breeds, its popularity is increasing by leaps and bounds. Every year more and more farmers and graziers are going in for it. Canterbury, N. Z., is justly noted for producing the very finest quality of lambs for the London market, in fact, the words "Prime Canterbury" are a by-word of excellence on the Smithfield meat market. And of prime meat, Corriedale mutton is the primest, and it is not too much to say

that, without it as the mainstay of Canterbury excellence, this Province would find it impossible to maintain for long her well-earned supremacy in the fat frozen-lamb trade of Great Britain.

A CORRECTION.

In the October issue of this paper, on page 40, appeared a very interesting story of the London wool sales. This was an extract from a report made by the Secretary of Agriculture of Canada, but through an error of the printer credit was not given the Canadian Department for this article. We therefore make this correction.

ACKNOWLEDGEMENT.

We beg to acknowledge that the large full-page cut of the Shropshire ram appearing in this paper is a ram from the flock of McKerrow & Sons, Pewaukee, Wisconsin.

Ask your local butcher to hang a sign in his shop telling the public that at all times he has for sale the choicest mutton and lamb.

SHEEP IN TENNESSEE.

The total number of sheep of shearing age in Tennessee on April 15, 1910, was 470,000, representing an increase of 52.8 per cent as compared with the number on June 1, 1900 (308,000). The approximate production of wool during 1909 was 496,000 fleeces, weighing 1,854,000 pounds and valued at \$466,000. Of these totals about one-fifth represents estimates. The number of fleeces produced in 1909 was 43.1 per cent greater than in 1899. The average weight per fleece in 1909 was 3.7 pounds, as compared with 4 pounds in 1899; and the average value per pound was 25 cents, as compared with 19 cents in 1899.

SEPTEMBER WOOL IMPORTS.

	Pounds	Dollars
Class one.....	3,399,242	726,415
Class two.....	2,166,160	533,110
Class three.....	13,646,394	1,941,110
Total	19,111,796	3,200,635

Every wool grower that has printed stationery should place a mutton design on his envelopes and letterheads. This will keep the word "mutton" before the people.

WANTED:

LONG WOOL FLEECES

I buy fleeces of wool such as grow on "Lincoln" and "Cotswold" sheep of extra long staple.

Nothing shorter than twelve inches, and running up in lengths to twenty inches and longer.

I pay for such long wool "\$1.00" per pound.

Submit samples and write for further particulars to

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COMMERCIAL PHASES OF
THE SHEEP INDUSTRY

(Continued from page 22).

they accept in the final stage is more apparent than real. The Merino will shear ten pounds of 20 cent wool against six pounds on the mutton sheep, which realizes only 2 or 3 cents more, a deficiency of 50 cents to 75 cents per head annually on wool in the case of the mutton-bred animal which must be recouped on lambs. Most of the aged sheep marketed are worn out wool-making machinery.

In the evolution of things the cost of maintaining our flocks on less than a 7-cent basis for lambs and 20 cents for wool will be impossible and I believe elimination owing to winter hazards and other factors will eventually reduce supply of both wool and mutton to a volume where these prices will be legitimate. In this evolution only the strong will survive. To properly remunerate lamb growers we must get \$7.25 and \$7.50 for fat stock and \$6.25 and \$6.75 for feeders. In the future, Idaho, Utah and Washington will be on a mutton basis, marketing 75 per cent fat and 25 per cent of feeding lambs. Montana, Wyoming, the major part of New Mexico and Arizona will reverse this proportion, as their range is not suited to a mutton basis. During the past ten years the tendency all over the world has been to emphasize the mutton phase of the industry by crossbreeding. New Zealand and Argentina flocks are now practically all crossbred and Uruguay is hastening in the same direction. Australia is also eliminating the Merino, New South Wales being the only province producing any appreciable quantity of Merino wools, so that during the next five years we will witness a tremendous appreciation in the value of that staple, sufficient in my opinion to permit such States as Ohio, Michigan, Virginia and Pennsylvania to reinstate Merino flocks at a profit. I look for Merino wool to go to a scoured basis of 85 cents to \$1 per pound within the next five years. Of course in reinstating the Merino in Eastern States an improved type, partaking more of mutton quality, smoother and less heavy pelted than the old-stayle ranger will be used. The wool outlook is very bright. In the United States alone this year the clip is 45,000,000 pounds short and Australia reports a 15 per cent shortage. Further restriction of

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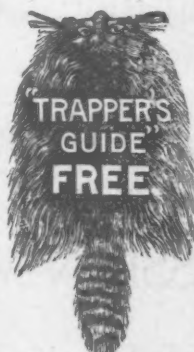
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production, owing to a combination of causes, is probable. Many are getting out of the business owing to its hazards. Settlement in Montana and severe losses in Wyoming have been serious production curtailment factors. In Australia and Argentina expansion of agricultural operations has been at the expense of the sheep industry. Argentina is being rapidly occupied by Italian farmers who are wheat raisers and in Australia the coast line in an agricultural sense is being steadily pushed back. As civilization spreads wool consumption grows in same ratio. I am confident that within the next decade on this account the tariff will cease to be a live issue with wool growers in the United States.

MUTTON IN IRELAND.

Hon. George E. Chamberlain of Cork, Ireland, sends to the Department of Commerce and Labor a report that the average price for fat sheep per hundred weight in Ireland last year was \$8.35. The average price for two-year-olds by the head was \$8.03, and yearlings, \$7.89. He also reports that the average price of lambs per head was \$5.98. To the American pro-

ducer of live stock these prices will seem unusually large, but it merely sustains what we have been asserting all along, that the price of fat sheep and mutton in Great Britain is practically double what it is in this country.

MUTTON A FAVORITE DISH.

Travelers say that mutton is the favorite dish of the English people.

The fine pasture and grazing facilities of England, New Zealand and Australia, from which most of the English mutton comes, undoubtedly accounts for this condition.

However, the United States is fast becoming a great mutton-raising country. During the past ten years wonderful progress has been made in the scientific feeding and handling of sheep in America, which is now producing as fine a grade of mutton as any country in the world.

Feeding has a great deal to do with the flavor of mutton. Short grass of the meadow or clover field, or the fine shrubbery of the mountains, makes the best feed.

In the hotels, cafes, and homes of this country, mutton shares prestige with beef

and pork as a favorite and delicious dish for the table.

While mutton is very high in food value for manual work, on the other hand it is the most valuable of all foods for people of sedentary habits, on account of its being so easily digested.

Women, children and professional people should find in mutton an ideal food.

STUMP DESTROYER.

An exchange from Australia reports that a stump eighteen inches in diameter may be destroyed in five weeks by boring a hole in it and filling this with a mixture of nitric and sulphuric acid. There is some danger in mixing the acids as both are very corrosive. It is said that one-half pint of each acid is all that is required. This is poured into the hole, which is then plugged up. Before attempting this experiment a chemist should be consulted about mixing the acids.

Congress will be watching the Cheyenne Convention, if the interest is slack and the attendance small, not much attention will be paid to the sheepman's demands.

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